

SEASONAL VARIATIONS IN EMPLOYMENT

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SEASONAL VARIATIONS IN EMPLOYMENT

By

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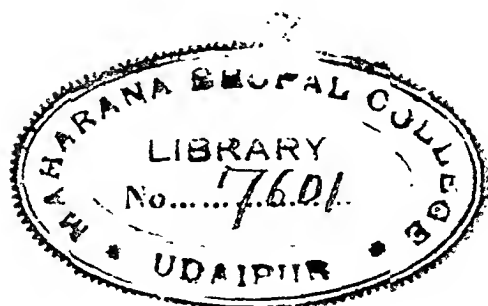
*Economics Research Section
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With Introduction by

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WITH DIAGRAMS



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First published, March 1936

INTRODUCTION

IN the post-war years the general problem of unemployment has been so much with us that it is, perhaps, not surprising that, during these years, little systematic attention has been given in this country to the aspect of unemployment with which this book is concerned. Doubtless, too, this neglect is also due to the fact that, although the existence of seasonal unemployment was well recognized in pre-war days, writers on the subject were then inclined to emphasize the social hardship which it involved, but to minimize its importance as a factor in the general problem of unemployment. Regarded as having the characteristics of a natural phenomenon which comes and goes, seasonal unemployment was spoken of as essentially a surface movement. When we bear in mind that, owing to seasonal unemployment alone, there might be continuously a large army of unemployed, the need for detailed inquiry as to the actual facts of the situation in this country becomes obvious.

Here an acknowledgment is due of the work done on the subject in the United States in recent years notably by Professor Simon Kuznets and others. It was, indeed, partly this work which suggested to the Economics Research Section in the University of Manchester the advisability of the present piece of research being undertaken. Other influences were that the members of the Section wanted, for this country, answers to the sort of questions set out in the first chapter of the book, and that they realized that, in the British unemployment insurance returns, a most

valuable source of information had become available. From a scrutiny of these returns, supplemented by an investigation of the position in a few selected industries, they hoped that, even if the questions could not be fully answered, fresh light might be thrown on the British problem of seasonal unemployment.

How far Mr. Saunders has been successful in these aims it is not for the present writer to estimate. That must be left to the judgment of those of his readers who were not closely in touch with him during the progress of his work. It may, however, be permissible to suggest that, in the method of investigation which he has adopted, and in his elucidation of the problem as it relates to classified industries and trades, he has broken the ground for many particular inquiries which, if undertaken, could hardly fail to yield valuable results.

In his selection of particular industries for investigation he was influenced by a desire to discover whether such industries as had become of larger importance in the changing structure of British industry were likely to increase or decrease seasonal unemployment as a factor in the general problem of unemployment. On the whole his conclusions on this matter incline to the favourable side. But, here, the practical significance of his investigation lies in the indications he gives of methods whereby the dimensions of seasonal unemployment might be lessened. While it may be true that much could be accomplished if the appropriate co-operation of private individuals and of public and semi-public authorities were assured, it is hard to resist the view that the more promising centre of attack is with those responsible for the internal organization of industries and trades. Hence the need for detailed inquiries into the conditions especially of such industries

and trades as are notoriously seasonal, to the end that, in the light of the fullest information attainable, remedial lines of policy may be more precisely formulated.

G. W. DANIELS.

University of Manchester.

ACKNOWLEDGMENT

THIS book was written while I was a member of the Economics Research Section of Manchester University and whatever merits it may possess are due in large part to the advantages which I have had as a member of the Section. For guidance in the pursuit of elusive facts, for the suggestion of many profitable ideas and the rejection of many bad ones, for regular and constructive criticism of the form and content of the work, I owe a great debt to my colleagues and friends of the Research Section, and, in particular, to Professor G.W. Daniels and to Mr. John Jewkes, the Director of the Section. For the greater part of the lengthy and elaborate statistical calculations, I am indebted to Mrs. John Jewkes, Miss B. Morris and Miss E. Howarth. To the Rockefeller Foundation, and the University, without whose financial assistance the work of the Research Section could not go on, I give my thanks.

In addition, I wish to acknowledge the help which I have received from officials of the Ministry of Labour at the North Western Divisional Office, the Trade Boards Division and the Employment Exchanges. Their profound knowledge and experience is always of the greatest value to the inquirer. I have received, too, a great deal of information from numerous persons engaged in the industries investigated here, and thank them for their interest and readiness to help.

I am grateful to the Editor of the *Economic Journal* for permission to reprint material published therein.

Manchester.

C.T.S.

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CHAPTER

THE PROBLEM OF SEASONAL UNEMPLOYMENT

I. INTRODUCTION

THE existence of unemployment does not present a homogeneous problem to which a single explanation can be given or a single solution found. Most unemployment is connected with some kind of shifting of balance or fluctuation in economic activity. Such fluctuations may be rhythmical in form, recurring within fairly regular intervals of time, and their effects on employment will in consequence be for the most part temporary; or the changes may be isolated and unique, in which case their effect may be permanent. Thus there is unemployment due to secular movements, that is, to long-term changes in the economic structure of the world or of a single community: we may instance the changes which have led to the decline in the exports of British cotton goods and coal or to the reduction in the demand for carriages. Long period changes of this type are not, so far as we know, regular in their appearance. There is unemployment due to the cyclical fluctuations in business activity, for example to the recession in almost all industries in Great Britain from 1929 to 1932. There is unemployment due to seasonal fluctuations recurring every year, for instance to the winter slackness in the building trade. Further there are regular fluctuations in activity covering shorter periods than the year: for instance, retail

shops commonly take on additional labour on Saturdays and there are consequently shop assistants unemployed during the rest of the week. These last three types of fluctuation—cyclical, seasonal and short period—are all fairly regular and rhythmical in form, repeating themselves within more or less definite periods. But there are in addition short-period casual fluctuations which like secular trends do not recur regularly and show no rhythmical pattern; these too can cause unemployment. For example there is always a high level of unemployment among dock labourers, on account of the very irregular demand for their services.

Each of these kinds of unemployment requires separate study and separate treatment. The object of this book is to isolate one factor, the seasonal element, and to see what contribution it makes to the general problem, how it operates and whether the unemployment resulting from it could be reduced.

Although the effects on employment in Great Britain of structural changes, cyclical movements and irregular fluctuations in casual trades have been frequently studied, little attention has been given to the part played by seasonal variations.¹ The reason for this comparative neglect seems to be that the aggregate figures of employment in Great Britain show remarkably little seasonal variation. Consequently it is thought that

¹ The only detailed investigations made in Great Britain are the valuable inquiry made by the Royal Commission on the Poor Laws in 1905 and *Seasonal Trades*, a series of descriptions of certain seasonal industries in 1912, edited by Sidney Webb and Arnold Freeman. Since the complete statistics derived from the unemployment insurance system became available the only general work done consists of statistical studies such as those of the London and Cambridge Economic Service (*Special Memoranda* 7 (1924) and 36 (1932)) which were made for the special purpose of eliminating seasonal movements from various statistical series. See also the Bibliography, p. 300

the seasonal problem in this country is so insignificant that it may reasonably be ignored. The seasonal variation in the total figures of employment in any economy is, however, the net result of a variety of seasonal patterns in the different industries. The total fluctuation, therefore, will only be great when either a large proportion of the industries have the same pattern, or when one industry predominates. A country in which half the occupied population were occupied as ice-cream vendors and the other half as professional footballers, and in which there was no mobility between ice-cream selling and football, would show little net seasonal fluctuation in its statistics of total employment, though half the workers might be seasonally unemployed at all times of the year. In Great Britain no one industry predominates and the seasonal patterns in the different industries to a considerable extent counteract each other; for these reasons the net seasonal fluctuation in total employment is not great.

If the mobility of labour were so perfect that almost every worker could find employment in another trade during the slack season in his own, then the absence of seasonal variation in total employment would indeed show that seasonal variation, as a factor in the unemployment problem, is of no great significance. In fact, of course, labour mobility is far from perfect and numerous ice-cream vendors are out of work while the football season is at its height. As indicating the real importance of the problem of seasonal unemployment the variations in aggregate employment are therefore misleading and we are obliged to leave them on one side and to study the variations in individual industries.

2. GENERAL PLAN OF THE BOOK

The first objective is a general view of the seasonal problem in British industry. The questions to be answered—and answered in quantitative terms—fall into four groups.

1. What industries are subject to seasonal fluctuation? What is the amplitude¹ of fluctuation in each and what pattern¹ does it show?
2. What is the importance of seasonal fluctuation as a factor in the unemployment problem? To answer this question we must ask: how many people are affected by seasonal fluctuation? for what proportion of total unemployment do seasonal variations account? of what pattern is the total seasonal curve?
3. Does the relative importance of seasonal unemployment vary with changing conditions? What has been the effect of the great changes in economic structure since the pre-war period, the rise and fall of industries and the institution of unemployment insurance and employment exchanges, on seasonal unemployment? Are seasonal fluctuations increasing or decreasing? What is the effect of cyclical fluctuations on the seasonal problem?
4. How do seasonal fluctuations in Great Britain compare with those in other countries?

Having given, so far as possible, a statistical answer to these questions we can pass on to a study of those elements in the seasonal problem which are less easily measurable. First we shall enquire in general terms into the causes and effects of seasonal fluctuations and

¹ The "amplitude" describes the size or extent of the seasonal fluctuation, the "pattern" describes the shape it takes.

into the question of how far it would be in the general interest to reduce the unemployment for which they are responsible. In order to throw light on these questions, and on the practical possibilities of reducing seasonal unemployment, we can study at closer quarters some selected industries—motor manufacture, the clothing trades and building. These industries are chosen not only as representative seasonal trades but also because of their growing importance in the economic structure of this country. These more detailed studies may serve to bring out some of the principal factors involved in seasonal variation. We shall analyse, first, the facts of seasonal variation in each industry, showing so far as possible how seasonal fluctuations in demand are reflected in production and in employment. We shall see how climate, fashion and conventions, and the organization of industry and of the labour-market all contribute to seasonal unemployment and we shall enquire how these industries are meeting the problems raised by seasonal fluctuation. We shall ask how far, and by what methods, seasonal fluctuations might be reduced and their effects on the workers modified. We shall enquire, too, into the special problems of agriculture and of work in holiday resorts, where much employment is necessarily limited to a short part of the year.

With the results of these more detailed enquiries in mind, we can return to the seasonal problem in industry in general. What methods are actually adopted in industry to reduce or to mitigate the bad effects of seasonal fluctuations, and how far could the use of these and other methods be extended? What, in short, are the prospects of an attack on the particular sector of the unemployment problem isolated in this book?

CHAPTER II

THE IMPORTANCE OF SEASONAL FLUCTUATION IN BRITISH INDUSTRY

I. THE STATISTICAL DATA AND METHODS EMPLOYED

BEFORE the questions posed in the last chapter can be answered, the statistical tools used in the analysis must be described. The statistical problem is that of isolating seasonal movements from series affected by many kinds of fluctuation—secular, cyclical, seasonal, short period and casual. It is proposed to describe in this section the principal data employed and the chief methods of measurement adopted. The results of the calculations will be found in the second section of the chapter.

(a) *The Data.*

We are concerned with seasonal fluctuations in employment. Employment figures are not directly available, but we have in the statistics derived from the operation of the unemployment insurance system an analysis of unemployment more complete, more detailed, and extending over a longer period, than the unemployment statistics of any other country. From this material it is possible to construct a monthly series of employment figures in every industry. The data consist of annual (July) returns of the numbers insured, and monthly returns (relating to the third Monday in each month) of the number of insured persons unemployed (including those short-time workers who were

unemployed on the day of the count) in each of the root industries into which the insured population of the United Kingdom is divided by the Ministry of Labour. We need to estimate first the numbers *insured* in each month. To arrive at this, one-twelfth of the difference between the numbers insured in each pair of successive Julys is added to or subtracted from each of the intervening months. This procedure leaves room for a certain amount of error and possibly to an underestimate of the seasonal fluctuation, since the net change in the numbers insured may vary considerably and perhaps seasonally from month to month during a year ; as a rule, however, the net change during any year is small in proportion to the total. From the estimated insured population each month, in each industry, is subtracted the corresponding unemployment ; the result is the nearest possible approach to a monthly series of numbers employed, by industry, extending from July 1923.²

Certain observations should be made at this point regarding the validity and completeness of these figures. The number employed is arrived at by subtracting the unemployed from the insured. But only the number of registered unemployed is known, and there is a certain number of persons in seasonal trades who do not register as unemployed during the slack season because they are not seeking off-season employment. Secondly, the figures do not include non-insured occupations—that is, private domestic service, permanent jobs under railway companies or

¹ Since the period for which the analysis was made, two new industrial classifications have been introduced.

² In that month changes were made in the industry classification which make comparison with earlier figures unsafe.

Seasonal Variations in Employment

public authorities, the majority of agricultural occupations, and non-manual work at more than £250 a year.

Lastly, it should be remembered that changes in numbers employed are not an exact indication of changes in the amount of work done. Overtime, reduced hours, and the changes that may take place in hourly output per head between busy and slack seasons may be responsible for a varying daily output without any variation in the number employed.¹

(b) The Isolation of the Seasonal Variation.

From the series of monthly employment figures in each industry must next be extracted the seasonal variation. This is not simple, partly because of the many kinds of fluctuation apparent in the series and partly because the seasonal variation is not an unalterable rhythm persisting from year to year but is itself a changing phenomenon. The seasonal curve may vary in a random way—one year for instance the crops may be harvested early, the next year late—or there may be a definite trend in an industry towards regularly increasing or regularly diminishing amplitude of fluctuation.

There are several possible methods of measuring seasonal variation.² The method selected for the purpose of this book had to present the results in an easily understood graphical form, and to show not only average seasonal variation over a period but also

¹ No allowance has been made for persons sick or for other reasons absent from work without being unemployed. It is usually estimated that 3½% of the insured are sick or for other reasons absent from work, but no estimates are available of the proportions in different industries. Strictly speaking, these persons should be deducted from the numbers insured. Consequently the estimates of employed persons are slightly too high but the error will not appreciably affect the seasonal fluctuation.

² See *London and Cambridge Economic Service Special Memorandum No. 7* (1924).

changes of amplitude and pattern from year to year. The crudest method is that of averaging all the January values in the series, all the Februaries and so on ; if the period covered is long enough for the cyclical movements to cancel out, this method is fairly satisfactory. During the years 1923-33, however, the trend of employment did not exhibit an evenly balanced cyclical pattern. Moreover, this method does not show changes in the seasonal fluctuation from year to year any more than the crude figures. Another method, used by the London and Cambridge Economic Service in treating unemployment statistics and by the Harvard Economic Service, is that of calculating average differences from month to month—e.g., the average change in numbers employed between January and February, February and March and so on. There are two objections to this method for the purpose of this analysis. Although useful for eliminating the seasonal element from a series, it does not show changes in seasonality from year to year. Again it does not give the information we really want ; it may indicate, for instance, that employment in a particular industry in February is on the average 10% greater than in January. We are anxious to know, however, what is the relation between employment in February and some normal figure of employment such as the average for the whole year.

The method that fulfils best the conditions laid down is that of calculating the percentage deviations¹ of the monthly figures from a twelve-month moving average. The moving average represents the secular movement

¹ Percentage deviations were used in preference to absolute deviations because the absolute figures are subject to very considerable changes during the period.

and the greater part of the cyclical fluctuation. The deviations from the moving average therefore represent the seasonal variation and random movements only. (Short period fluctuations have already been for the most part excluded by the use of monthly data.) The random fluctuations that remain in the series—due to strikes, legislative changes and similar causes—can best be allowed for by inspection; the period covered is long enough to show whether particular fluctuations recur regularly (in which case they may be regarded as elements in the seasonal pattern) or are only apparent occasionally (in which case they may be regarded as random movements). More refined methods might be used¹ but it is very doubtful whether in view of the crudity and approximations of employment series the adoption of more delicate statistical tools would be justified.

The percentage deviations of the monthly employment figures from the twelve-month moving average may therefore be calculated and charted for every industry.² Every industry, of course, shows some considerable deviations, and the next step is to discover in which cases the pattern of the deviations during the year recurs with sufficient regularity to be regarded as a true seasonal variation. If the pattern is approximately the same year after year the industry is regarded as subject to a genuine seasonal fluctuation. In some cases, there is no regular seasonal pattern but a general tendency for employment to be greater at some times

¹ For example methods have been worked out for calculating a changing seasonal variation. See Joy and Woodhief *Journal of American Statistical Association*, September, 1928

² The use of the moving average method means that the first and last six months in the series cannot be used. Consequently the deviations are only available for the years 1924-32

than at others—for instance to be at a higher level in winter than in summer. These industries were regarded as “Irregularly Seasonal.”

The information obtained so far is used mainly for examining changes in seasonal variation. We also need to calculate and measure for each seasonal industry some sort of average or representative seasonal curve, to telescope the figures for the period covered into a single pattern. What sort of average ought to be used? In a good many cases the values in particular months are exceptionally high or low on account of special non-seasonal circumstances—strikes, for example. The use of the arithmetic mean would give undue weight to these values. The position of the simple median, on the other hand, may be due to accident where the values are widely scattered. The best method is to take the extended median (i.e., the mean of the central three or four) of the values shown in each year for each month. Exceptional values are automatically eliminated but the final result does not depend on the accident of the particular value obtained in any one year. This calculation is made for those industries only which show a definite seasonal variation.

It should be observed that many of the industries, as classified by the Ministry of Labour, are by no means homogeneous as regards seasonal fluctuation. An “industry” often consists of several branches, some of which may be highly seasonal, others quite stable. A good example is the heterogeneous collection of enterprises called “Hotel, Public House, Restaurant, Club and Boarding House Service.” This group, which as a whole shows only a moderate degree of seasonal variation, includes the large number of hotels and boarding houses in seaside and holiday resorts which

are completely or practically closed down from October to March, and in which the seasonal fluctuation is as intense as it can be ; but the figures for this class of enterprises are overweighted by those for the much larger number, in other places than holiday resorts, which employ about the same number of persons all the year round.

(c) Amplitude of Variation.

The next step is to find a measure of the amplitude of seasonal fluctuations in an industry, in order to compare the extent of variation in one industry with that in another, and to measure changes in the amplitude of variation at different times. Two methods are used, each being appropriate for its own purpose. First, the range of variation can be measured by assuming that there is no seasonal unemployment at the highest point of the seasonal curve and by taking the difference between the numbers employed at the seasonal peak and that at the seasonal trough. The peak and trough are defined as the months in which the percentage deviations from the moving average are respectively highest and lowest. The result, which can be expressed either in absolute figures or as a percentage of the numbers insured in the industry, shows the range through which the seasonal fluctuation moves. The chief use of this method is to discover the total number of persons affected by the seasonal swing in an industry. If the result in a particular industry is, say, 10,000 or 5% of those insured, it means that during the course of a year 10,000 persons are unemployed, because of the seasonal fluctuation, for varying periods. At the peak, all 10,000 are in work ; at the trough, all are unem-

ployed. The figures for any single year, however, cannot be used with confidence because they may be affected by non-seasonal fluctuations but the average for the period 1924-32 should go some way towards elimination of these.

The second method of measuring amplitude of fluctuation is the calculation of the mean of the percentage monthly deviations in numbers employed from the moving average, i.e., the mean deviation of the results of the calculation described in (b) above. This method, showing as it does the *variability* of seasonal fluctuation, is most useful for comparing one industry with another.

(d) *Aggregate Seasonal Unemployment.*

So far the methods of calculating and measuring seasonal fluctuation in single industries have been described. But in order to answer the questions posed regarding the relative importance of seasonal variations in industry as a whole, a method must be found of combining the results for the individual industries. One way of doing this would be to apply precisely the same methods to the aggregate figures of employment in all industry; it has already been pointed out this would be misleading in so far as the seasonal patterns in different industries largely compensate for each other and leave therefore only a very small net effect in the aggregate statistics. But we cannot assume that workers are sufficiently mobile to transfer continually from seasonally slack to seasonally busy industries. In fact the degree of mobility is probably very small.¹ It is probably nearer the truth to assume complete absence of mobility;

¹ For fuller discussion of this point see page 271.

in this case the proper procedure is to add the results for the separate industries together.

Suppose, for example, that there were 20,000 persons seasonally unemployed in the building industry during the winter (and all employed during the summer), and another 20,000 seasonally unemployed in coal-mining throughout the summer (but employed during the winter). The aggregate figure would show no seasonal fluctuation and an apparent absence of seasonal unemployment. In fact, however, the average number of persons seasonally unemployed in these two industries would be 20,000, while the total number affected by seasonal unemployment at some time during the year would be 40,000.

There is, no doubt, some mobility between seasonal industries and to that extent, the figures obtained by adding exaggerate the seasonal problem. But on the other hand, the calculation also assumes complete mobility between the different branches, occupations and firms within each industry. In fact, it often happens that one section of a trade is busy while another is slack and yet that little movement of workers takes place between the two; painters, for instance, may be unemployed while plumbers are very much in demand.

The method of adding the figures derived from study of each industry, in order to discover the aggregate effect of seasonal fluctuation, therefore assumes complete mobility within each industry and complete immobility between industries. Both assumptions are certainly wrong, but the errors affect the result in opposite directions. There is no reason to suppose that the mistakes exactly cancel each other out, but it may at least be said that the result is nearer the truth than if

it were based on the assumption of perfect mobility between industries.

2. STATISTICAL ANALYSIS OF SEASONAL VARIATIONS IN EMPLOYMENT

The aim of this section is to present, so far as possible in statistical terms, a general view of the extent and nature of seasonal fluctuation in employment in British industry. No doubt the statistical tools are less delicate than they might be but the material on which they are used often proves refractory to precise treatment. No more than approximate accuracy will, then, be claimed for the results.

(a) The Seasonality of Individual Industries

The first question to be asked is : how many industries are subject to seasonal variation ? It was found that nearly every industry experiences some degree of seasonal movement. In sixty-three of the hundred industries into which the field of insured employment is divided there regularly occurs an annual fluctuation of similar amplitude and pattern. These genuinely seasonal industries included in 1932 76.6% of the total number of insured persons. This proportion is higher among females (84%) than among males (74%). In many industries the seasonal fluctuation is small but in all it occurs quite regularly. In twenty more industries, including an additional 12.7% of insured persons, there are some traces of seasonal variation but the seasonal swing is irregular and the pattern of it may alter appreciably from year to year. These are the industries described as "Irregularly Seasonal."¹ In short, nearly 90% of insured persons are attached to

¹ See page 11.

industries subject to some degree of seasonal movement in employment.¹

To complete the picture, we must refer to those workers who are not included in the unemployment insurance system and in respect of whose employment no monthly statistics exist. The principal classes outside unemployment insurance are: first, non-manual workers with salaries of more than £250 a year, most of whom do not suffer seasonal variations in their employment; second, workers employed by railways and public authorities on a permanent basis; third, there are domestic servants in private houses who, again, do not in general experience seasonal unemployment; the fourth class consists of agricultural workers many of whom are subject to considerable variations in employment² from month to month. More may be known about fluctuations in the employment of agricultural workers—and perhaps of domestic servants and of certain workers above the income limit of insurance—if the Unemployment Assistance Board, which is charged with the relief of the uninsured unemployed, starts to publish returns of the numbers of persons who apply to it.

Although some 90% of insured workers—but perhaps a smaller proportion of the whole occupied population—are engaged in industries which show some degree of seasonal variation in the number of workers they require, not all actually experience seasonal unemploy-

¹ In Appendix III the seasonal curve is charted for each of the sixty-three genuinely seasonal industries. In Appendix IV will be found a short note on the pattern and extent (or absence) of seasonal variation in every industry. In Appendix II the average changes from month to month in the unemployment percentages, and the actual numbers concerned, are calculated for the principal seasonal industries.

² Seasonal movements in employment among agricultural workers are described in more detail in Chapter IX.

ment. Probably the majority are employed with complete regularity and only a few are dismissed during the slack season in their trade. The proportion directly affected will depend partly on the arrangements made by firms in slack times—on whether they lay off altogether a certain number, or put a rather greater number on short time, working and “playing” alternate weeks—and partly on the amplitude of the seasonal variation. The first factor cannot be investigated except by studies of individual industries, and some attention is paid to it in the chapters that follow. The second factor, the amplitude of fluctuation, is a question which can be answered by statistical methods.

This leads to a second question: how do seasonal industries compare with each other as regards amplitude of fluctuation? Which are the most seasonal industries?

The mean of the monthly percentage deviations from the moving average has been taken as the best index of comparative seasonality,¹ and varies in the different seasonal industries from 3·4 to 0·2. The most seasonal industries, judged by this test, are tailoring (3·4), linen manufacture (3·2), cotton (3·1), building (2·7) and coal-mining (2·7). Among the important industries with very slight seasonal variation are the distributive trades (0·5) and printing, publishing and bookbinding (0·4).²

(b) The relative importance of seasonal fluctuations.

We come now to the central problem of the analysis: how important are seasonal variations in employment? As a first answer to this question, an estimate can be made of the total number of persons who experience some seasonal unemployment during the course of the

¹ See page 13.

² The figures are shown for all seasonal industries in Appendix I, Columns 4 and 5.

year by calculating the range of variation, that is, the difference between the numbers employed at the seasonal peak and the number at the seasonal trough.¹ The result varies from 12 or 13% of the insured in coalmining, coke ovens, shipbuilding and cotton to 3 or 4% in distribution, road transport, printing, etc., and laundries.²

By addition of the totals for the different seasonal industries, it is found that from 600,000 to 850,000, or from 5% to 7% of the insured population, are thrown out of work at one time of the year or another because of seasonal fluctuation. The figure is highest during the slump years 1930-32, for, as we shall see, seasonal fluctuation tends to increase with general depression. The average for the "normal" years 1924-29³ was 5.2%.⁴

TABLE I.—ESTIMATE OF THE TOTAL NUMBER OF INSURED PERSONS IN THE UNITED KINGDOM EXPERIENCING SEASONAL UNEMPLOYMENT DURING THE YEAR, RELATED TO TOTAL UNEMPLOYMENT

	(1) Sum of differences between numbers employed at sea- sonal peaks and troughs in 63 sea- sonal industries	(2) Average total un- employment, all industries	(3) (1) as per cent total insured population
1924	603,006	1,162,000	5.2
1925	746,551	1,275,500	6.3
1927	586,853	1,145,000	4.8
1928	596,423	1,247,000	5.0
1929	592,360	1,224,000	4.9
1930	838,692	1,927,000	6.8
1931	856,605	2,642,000	6.7
1932	720,230	2,756,000	5.6

¹ See page 12

² The figures are shown for all seasonal industries in Appendix I, Column 2.

³ Excluding 1926 on account of the disturbances caused by the coal dispute

⁴ See Table I.

This percentage, however, represents the maximum number of persons affected by seasonal unemployment. The 5% are not all unemployed at the same time, and some months in the year will show a higher proportion than others. To get a clearer idea of the relative significance of seasonal movement, an estimate is required of the *average* amount of seasonal unemployment during the year.

Seasonal unemployment in a single industry in a single month can be measured by assuming that at the seasonal peak in that industry there is no seasonal unemployment, and by finding, for the month in question, the difference between employment in that month and employment at the seasonal peak. This difference may be taken as an approximate estimate of the extent of seasonal unemployment in the selected month. The annual average of these monthly differences indicates the average seasonal unemployment during the year in that industry. To make a similar calculation for industry as a whole, we simply add the actual figures for the different industries in respect of each month and then, again, find the average of the twelve months. This calculation has been made for three representative years: 1924 and 1928, regarded as "normal" post-war years, and 1932, a depression year.¹

The average total number of persons seasonally unemployed was 218,000 in 1924, 237,000 in 1928 and 301,000 in 1932. As percentages of the total insured, these figures represent 1·9%, 2·0% and 2·3% respectively.² Two per cent. of the insured population is

¹ Table I shows that these three years are reasonably representative.

² See Table II. The figures for each seasonal industry are given in Appendix I, columns 7, 8 and 9.

not, it may be thought, a high figure. We want to know, however, for what proportion of total unemployment seasonal fluctuations are responsible. To discover this we must find the relation between average seasonal unemployment and average total unemployment. Seasonal unemployment accounted on the average for about 18% of the total unemployment in 1924 and 1928. In 1932 seasonal fluctuations increased, but not so much as total unemployment; the proportion then diminished to less than 11%.¹ It should be remembered that these figures must minimize the real amount of seasonal unemployment, because we have ignored entirely those industries in which there is an irregular seasonal element.²

In normal times, then, seasonal fluctuation accounts for no small part of the whole unemployment problem, but the fact that fluctuations in separate industries compensate for each other tends to obscure their real importance. Because of immobility of labour this "compensation" is a purely statistical phenomenon and does not correspond to anything that actually takes place in industry.

Busy seasons in some trades coincide with slack seasons in others and there is no single month in which there are not some industries enjoying their busy season and others undergoing a slack period. There are, however, distinct concentrations of busy seasons in March-June and November-December and of slack periods in January-February and July-August. There is a distinct seasonal pattern, though of slight amplitude, in total employment, but the curve is varying and uncertain and in some years is almost completely obliterated by cyclical movements.

¹ See Table II.

² See page 15.

The general pattern of seasonal movement in employment is as follows: In January and (generally) February most industries are depressed, the only important exceptions being coalmining and cotton. In March (sometimes in February) the spring boom in the clothing trades, motor manufacture, wool and shipbuilding begins to become apparent; the building and building material industries do not begin to become really active till about a month later. In June or July a summer recession begins in clothing, motors and textiles but building, road transport, food and drink trades and hotels, etc., service (all except building being affected by summer holidays) continue active through the summer. Coalmining is slack all through the spring and summer. In November and December activity increases in coalmining, textiles, and motor manufacture, and in those industries affected by the Christmas spurt in demand—e.g., musical instruments, hosiery, electric cables (which includes radio apparatus) and tobacco. Building and building materials, shipbuilding and hotel service, on the other hand, are depressed. The net result of these fluctuations is a low level of total employment in January followed by a considerable spring peak. In late summer comes a second slack season, while in late autumn and at Christmas total employment revives.¹ The direction of movement

¹ A really representative index of production should show the same seasonal pattern (but perhaps not the same seasonal amplitude) as total employment. Actually, however, the two principal quarterly indices of production in Great Britain—those of the Board of Trade and the London and Cambridge Economic Service—show quite a different seasonal pattern from the employment statistics. The reason for this discrepancy is that the production indices, based mainly on figures relating to the early stages of the productive process, are not representative of industry as a whole. Among manufacturing industries, clothing and building—which have a considerable influence on the seasonal pattern of employment—were both omitted from the production indices until recently.

from one month to another often varies from year to year, but the fall in employment in January, the rise in February and March, the fall in July and the increase in December are almost invariable in post-war years.¹

TABLE III.—CHANGES IN TOTAL EMPLOYMENT IN U.K.
FROM MONTH TO MONTH (INCREASE, DECREASE OR NO
CHANGE) 1924-33

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
1924	—	+	+	...	+	—	—	—	...	—	+	+
1925	—	+	+	+	...	—	+	—	...	+	+	+
1927	—	+	+	...	+	—	—	—	—	—	—	+
1928	—	+	+	...	—	—	—	+	+	—	—	+
1929	—	...	+	+	—	...	—	+	—	+
1930	—	+	—	+	—	+	—	+	+	—	+	—
1931	—	+	+	+	+	—	—	...	—	+	+	+
1932	—	+	+	—	—	—	—	—	+	+	—	+
1933	—	+	+	+	+	+	—	+	+	+	+	+

No. of years in which :

Increase	0	8	8	5	4	2	1	3	4	5	5	8
Decrease	9	0	1	1	4	6	8	4	2	4	4	1
No change	0	1	0	3	1	1	0	2	3	0	0	0

+ Increase in employment since previous month

— Decrease in employment since previous month

... No change in employment since previous month

The appearance of seasonal fluctuation in an industry implies that there must be a certain reserve of labour fully employed only at the height of the season. If there were no seasonal swing (and leaving out of account other kinds of fluctuation), the average number now employed would be fully employed all the year, while the existing difference between the average and the number employed at the seasonal peak would not

¹ See Table III.

be required at all. The size of this reserve pool of seasonally employed labour during the post-war period (adding the figures in individual industries) is from 2% to 3½% of the total insured population, being highest in years of general trade depression.¹

TABLE IV.—ESTIMATE OF SEASONAL LABOUR RESERVE

	(1) Sum of differences between peak and average employed in 63 seasonal industries	(2) (1) as per cent. total insured population
1924	273,739	2.4
1925	332,306	2.8
1927	239,050	2.0
1928	280,965	2.4
1929	238,900	2.0
1930	422,626	3.4
1931	431,753	3.4
1932	330,863	2.6

(c) *Changes in the Importance of Seasonal Variation.*

The pattern and amplitude of the seasonal variation in a time series is not necessarily a stable and permanent characteristic of that series. The data already produced show that the seasonal fluctuation in the employment statistics of many industries changes considerably from one year to another. An alteration in markets, in industrial organization or policy, in technique, in labour supply or in the general level of unemployment may have a very appreciable effect on the seasonal curve.

Are seasonal fluctuations in British industry tending

¹ The figures for each year are shown in Table IV. The figures for each seasonal industry will be found in Appendix I, column 6.

to increase or to diminish in importance? Is the seasonal element becoming a more or a less significant factor in the British unemployment problem? A change in the importance of the seasonal element in industry as a whole may be associated either with a long period trend or with cyclical fluctuations. In fact, as will be shown, both factors have an effect on seasonality and it is important to separate their respective influences. First we shall consider the long period trend of seasonal fluctuations and later the effect of the trade cycle.

The Changing Trend of Seasonal Variation. Since the pre-war period, and during the post-war years, not only have there been great changes in the balance of the economic system, the decline of certain important and long established trades and the rise of new ones, but in addition a comprehensive system of unemployment insurance and the organization of the labour market through employment exchanges have been developed. What has been the effect of these changes on seasonal fluctuation?

These influences might show themselves in two ways. In the first place, it might be expected that the amplitude of seasonal fluctuation in particular industries would tend to increase or diminish. In fact, there is no evidence of any general tendency of this kind. Examination of the seasonal fluctuation in seasonal industries between 1924 and 1932 shows indeed that in many industries the amplitude of fluctuation increased appreciably in 1930-32 but there can be no doubt that this is due to the influence of trade depression and not a long-period tendency. Between 1924 and 1929 no industry shows any obvious change in seasonal amplitude.

For comparison of the post-war with the pre-war period, certain series are available showing month to month changes in total wages paid, or in numbers employed, or in days worked per week. These series, which are published in the *Ministry of Labour Gazette* are continuous from 1904 or 1905. The proportion of trade unionists unemployed is also available for pre-war years in several industries, but in only a few cases can this series be regarded as a reliable indication of seasonal fluctuations in employment. By using with discretion the available information we can, however, reach a tentative conclusion as to whether seasonal fluctuation increased or diminished between the pre-war and post-war periods in a certain number of industries. The industries for which information can be used covered approximately one third of the insured workers in 1923.

It appears that the amplitude of seasonal variation in employment was greater after than before the war in the cotton, worsted, boot and shoe, coalmining and shipbuilding industries; seasonal fluctuation appears to have diminished in the wool, building,¹ furnishing and woodworking industries; there is no evidence of any appreciable change in the printing and publishing, leather or shipping industries or in dock labour. The data required for a comparison are not available in respect of any other industry. It seems, then, that no general tendency towards an increase or decrease in seasonal fluctuations has operated within seasonal industries either during the post-war years or between the pre-war and post-war periods.

¹ In building there seems to have been little change in amplitude of seasonal fluctuation among carpenters, joiners and plumbers, but a decrease of fluctuation among labourers

The second way in which a change in total seasonal fluctuation might come about is through a change in the relative importance of industries with varying degrees of seasonality. If, for example, total employment in the highly seasonal industries were declining, and employment in the slightly seasonal industries were expanding to the same extent, then the amount of seasonal fluctuation in the system as a whole would clearly diminish. This, indeed, appears to be happening in Great Britain.

It is possible to estimate approximately the change in total seasonal fluctuation in the following way: we have already selected as a measure of amplitude of seasonality in a particular industry the mean of the monthly percentage deviations from the moving average¹ during the years 1924-32. The average seasonal amplitude of all seasonal industries in a particular year can be calculated by averaging the seasonal amplitude of the individual industries, weighting the figure for each industry in proportion to the numbers employed. The result may be extended to all industries by giving those which are not seasonal a "seasonal amplitude" of 0. This calculation has been made in respect of all industries for the years 1924, 1929 and 1934. These years may be regarded as roughly comparable with each other from the point of view of their position in the trade cycle. The average seasonal amplitude of all industry was 1.19 in 1924, 1.12 in 1929 and 1.06 in 1934—a decline of 11% between 1924 and 1934. (See Table V.) If the seasonal industries are divided into groups according to their functions it will be found that there has been a decline in the average seasonality of each group, most marked

¹ See p. 13.

among industries producing raw materials and industrial products, least marked in building and the industries making building materials.

TABLE V.—SEASONAL CHANGES 1924, 1929, 1934. UNITED KINGDOM

Industry group	Numbers Employed			Average seasonal amplitude of industry groups			Per cent. change 1924-34 in seasonal amplitude
	1924	1929	1934	1924	1929	1934	
a. Raw materials and industrial gds.	(000's)						%
	2056.5	1792.5	1602.0	1.98	1.80	1.62	— 18.3
b. Building and building materials	1168.5	1333.5	1386.5	2.16	2.14	2.14	— 0.9
c. Transport & distribution	1922.0	2262.1	2493.5	0.62	0.60	0.59	— 4.8
d. Consumption Goods	2772.0	2881.5	2838.0	1.68	1.65	1.56	— 7.1
All Seasonal Industries	7919.0	8269.6	8320.0	1.57	1.48	1.38	— 12.1
All Industries	10428.5	10912.6	10835.5	1.19	1.12	1.06	— 10.9
Seasonal Industries as % total	76.0	75.8	76.8	—	—	—	—

A comparison on the same lines, but less accurate because of the nature of the material, can be made between 1911 and 1931 with the aid of the Census of Population. The number of persons engaged in each seasonal industry (as defined by the Ministry of Labour)

in 1911 and 1931 can be approximately estimated from the Census (Industry Classifications).¹ The weighted average seasonal amplitude can then be worked out for all seasonal industries and for all industries, by applying to each industry, as before, the average

TABLE VI.—SEASONAL CHANGES 1911-31 (ENGLAND AND WALES)

Industry group	Numbers engaged (census)		Average Seasonal amplitude		% change 1911-31 in seasonal amplitude
	1911	1931	1911	1931	
	(000's)				
a. Raw materials and Industrial Goods	2,029	2,581	1.63	1.47	— 9.8
b. Building and Building Materials	1,324	1,631	2.06	2.04	— 1.0
c. Transport and Distribution	3,143	4,234	0.47	0.46	— 2.1
d. Consumption Goods	3,102	3,372	1.50	1.45	— 3.4
All Seasonal Industries	9,598	11,818	1.27	1.18	— 7.1
All Industries	16,284	18,853	0.75	0.74	— 1.3
Seasonal Industries as % total	59.0	62.7	—	—	—

seasonal amplitude during the years 1924-32. The result is an average seasonal amplitude in seasonal

¹ Comparability (a) between the 1911 and 1931 Censuses and (b) between the Census and Ministry of Labour classifications is frequently difficult and occasionally unobtainable. The figures are only useful as indications of trend; the actual totals in the industrial groups in Table V are certainly not comparable with the corresponding totals in Table VI; Table V shows employed insured persons in the United Kingdom; Table VI refers to the totals attached to each industry in England and Wales.

industries only of 1·27 in 1911 and of 1·18 in 1931. (See Table VI.) But because the total number of persons engaged in seasonal industries was a greater proportion of all occupied persons in 1931 than in 1911, the average seasonal amplitude of all industry, seasonal and non-seasonal, was unchanged between these two dates. Since, however, seasonal fluctuations, as we shall shortly show, are normally greater in depression periods than in times of prosperity, and since 1911 was a boom year while 1931 was towards the bottom of a slump, the comparison between 1911 and 1931 suggests that between the pre-war and post-war periods the relative importance of seasonal fluctuation was diminishing rather than stationary.

This general result, which indicates slightly diminishing seasonality, whether we compare 1924, 1929 and 1934, or 1911 and 1931, is due to the shifting centre of gravity of the economic system. The industries producing raw materials and industrial goods have declined in relative importance. (See Table VI.) Coal-mining is the largest seasonal industry in this group and shows a very high seasonal amplitude¹; the decline in coalmining is indeed responsible not only for the decline in the group as a whole, but also for the high seasonal amplitude of the group. If coalmining were omitted from Table V, the average seasonal amplitude in Group A would be 0·97 instead of 1·98 in 1924, and 0·93 instead of 1·62 in 1934, in both cases a lower figure than in any group except transport and distribution. The building and building materials group of industries,

¹ Although the largest part of the coal produced goes to industrial uses, the greatest degree of seasonal fluctuation is probably to be found in the household consumption of coal. It is believed that domestic consumption accounts for approximately forty million tons of coal a year. Total output in 1933 was 127 million tons. See *Annual Report of Secretary of Mines* 1933, p. 136.

on the other hand, consists of industries of high seasonality, most of which have grown in importance during the post-war period. The expansion of the transport and distribution group is due to the growth in road transport and distribution, both industries of low seasonal amplitude. Of the industries making goods for direct consumption some, such as cotton and wool, both with considerable seasonal fluctuations, have contracted while the newer trades, most of which are only moderately seasonal, have taken their place.

The tendency towards diminishing seasonality in industry as a whole is thus due not to growing stability in individual seasonal industries but to the changing structure of the industrial system. This suggests that the influence of long period movements in industrial development has been of greater significance than the more direct and deliberate effect of such institutions as unemployment insurance and employment exchanges.

The Relation of Seasonal to Cyclical Fluctuations. *Prima facie* considerations would suggest that the course of seasonal fluctuation is likely to be different at different phases in the development of a cyclical movement. The original cause of most seasonal fluctuations is to be found in natural processes which are for the most part unaffected by cyclical booms and slumps. The effects of these natural factors are, however, appreciably modified by human intervention. These human and economic factors are necessarily affected by general prosperity or depression.

At a time of falling prices the tendency is to hold off the market for as long as possible. At every stage of the economic process, buyers are likely to avoid holding stocks of constantly depreciating goods and to postpone their orders, delaying until they are sure of a market.

Orders are only given in small lots and the time between order and delivery date is shortened. What are known as "hand-to-mouth" methods of buying and manufacturing become general.

In an industry already subject to seasonal fluctuations, the effect of this tendency is an even greater "bunching" of orders around the peak season, while the number of advance orders which help the manufacturer to fill up slack times is reduced. The manufacturer cannot afford to speculate by making stocks, and the risks of this sort of speculation are increased. These influences all tend to increase the amplitude and intensity of seasonal variations when prices are falling. In times of depression, too, seasonal operation is generally easy because there is probably a considerable surplus of unemployed labour and of unused plant to meet increased fluctuations in demand, and shortages of raw materials are not likely to arise. The discussion in later chapters of the situation in particular industries will show that the growth of hand-to-mouth methods in times of depression is very common indeed.

In periods of rising prices, on the other hand, these tendencies are reversed. Buying is advanced. Orders are given in excess of immediate demand. Manufacturers can safely make for stock, and there is a risk that they may be hampered at the peak by shortages of labour, plant and materials.

These considerations suggest that seasonal industries will show an amplitude of fluctuation varying positively with the general level of unemployment. How do the facts bear out this *a priori* conclusion?

As a test we may first examine any differences in seasonal variation that may appear in individual industries between the moderately prosperous years 1924-29

and the depression years 1930-32. In twenty-six out of the sixty-three industries the range of fluctuation was appreciably greater in the depression than the average of the whole period, while in only ten industries was it appreciably less.¹

The increasing amplitude is shown, among others, by coalmining, shipbuilding, public works, cotton, wool and all other textiles, hats and caps, boots and shoes, pottery, motor vehicles, rubber and leather trades. Decreasing fluctuation is shown by some of the building materials group, electrical engineering and some food trades. There is little difference shown in building, most of the transport and distributive group and clothing (except hats and boots).

In short, most of the numerically important seasonal industries show increasing variations in depressed years. A few show no change while no important industries show a decline. The *a priori* considerations suggested above no doubt explain these results but it is clear that those generalizations cannot be applied without discrimination to conditions in every industry.

Examinations of other statistics relating to seasonal industries brings out the same point. The range of variation for all industries together² averaged 5.2% of the insured in 1924-29 and increased to 6.4% for the period 1930-32. The average number of persons seasonally unemployed, again, increased³ from 2.0% of the insured in 1924 and 1928 to 2.3% in 1932. But while seasonal fluctuations increase in periods of depression, they do not increase so rapidly as total unemployment. While in 1924 and 1928 the seasonally

¹ See Appendix I, columns 2 and 3. Owing to the possibility of the difference between peak and low being affected in individual years by trend, small differences of less than 1% are not regarded as significant.

² See Table I.

³ See Table II.

unemployed averaged 17·9% and 17·8% respectively of the total unemployed, in 1932 this figure sank to 10·6%.¹ In the depression of 1930-32, then, seasonal variation increased less than total unemployment; in the slump seasonal unemployment was of less importance compared with general unemployment than in other phases of the trade cycle.²

Another aspect of the relationship between cyclical and seasonal fluctuations deserves consideration. It has been shown that in certain conditions the trade cycle affects the amplitude of the seasonal variation; can the seasonal variation influence in its turn the course of the trade cycle? It is often maintained that during the downturn or bottom of the depression phase of the trade cycle a stimulus in the form of increased expenditure applied on a fairly large scale would by its cumulative effects initiate a cyclical recovery. Now every year, in boom and slump, there occurs in the spring and autumn a regular seasonal increase in expenditure (on consumption and capital goods) in employment and in trade. Even in Great Britain, where the seasonal fluctuation in business is relatively slight, the spring and autumn upturns are very general and of considerable amplitude. For example, in 1932 the total amount of seasonal unemployment dropped between January and March by about 180,000.³ A recovery of these dimensions in such a short period of time is surely comparable in extent with any public

¹ See Table II.

² The association of increasing seasonal fluctuation with an increasing general level of unemployment has been noticed in Polish series by J. Wisniewski (*Econometrika*, April 1934) and in Danish, Dutch and Norwegian unemployment returns by E. Gjermoe (*Nordic Statistical Journal*, Vol. 3, 1931). See also J. Åkermann, *Economic Progress and Economic Crises*.

³ See Table II.

works or increased expenditure programme likely to be proposed. Should not the seasonal recovery have the same effect as the public works policy? Should not the cumulative reactions bring an upturn in the cyclical movement?

In fact, the seasonal recovery during early 1932 was followed by an increase of unemployment from April to August. A seasonal recovery cannot clearly in all circumstances lead to cyclical recovery even when the bottom of the trade cycle has been reached. The seasonal recovery contains within itself the seeds of the ensuing recession. It is essentially a *concentration* of activities into a certain period. If one month is more active, other months must be less active. A public works programme, designed to promote cyclical recovery, would have to be continuous until the desired result had been achieved.

It is possible, however, that when conditions are ripe for cyclical recovery, the normal seasonal upturn may, by giving a certain stimulus, set recovery going. If this were the case, it might be expected that cyclical recovery in Great Britain would occur in the spring or autumn. Similarly we should expect to find the trade cycle begin to turn downwards in winter or in summer.¹ Such a hypothesis is, however, difficult to test since the statistical analysis of trade cycles has not reached the point where the turn of the cyclical movement can be indubitably fixed at a particular month. The analysis of trade cycles in England between 1855 and 1914, given by Wesley Mitchell² and based on quarterly series, may,

¹ This is less probable, however, because the beginning of a depression is usually marked by some event quite independent of any possible seasonal factors—for example, a bank crash, or a Stock Exchange collapse.

² W. Mitchell. *Business Cycles*. Chart 22 (pp. 372-3). The Chart is based on the Annals' and Dr. D. S. Thomas' *Quarterly Index of British Cycles*.

however, be of value. Nine cycles are exhibited, showing eight peaks and nine troughs. Of the peaks four occur in the first quarter, two in the second, two in the third and none in the fourth. Of the troughs two fall in the first quarter, two in the second, four in the third and one in the fourth. These results are hardly conclusive but so far as they go they do not suggest any marked correlation between cyclical and seasonal recovery. Much more detailed analysis of the course of cyclical movements is probably required before any well founded generalization can be made.

It is worth noticing that not only seasonal fluctuations but also the irregular or casual fluctuations in employment tend to increase in years of depression. The factors making for greater seasonal fluctuation must also operate in non-seasonal industries and produce the effect of increased general instability. This phenomenon is very noticeable in the employment statistics of fifteen of the thirty-seven industries not subject to a regular seasonal variation.¹ In some of these trades it is interesting to see that the increased instability takes the same pattern in two or more depression years. The jute, textile finishing, etc., and constructional engineering industries are examples. This suggests that a regular seasonal fluctuation of employment develops in depression years in trades where none is evident in normal times. The probable explanation is that a tendency towards seasonal operation is always present in these industries, but that

¹ These industries are : iron ore and iron and stone mining, pig iron ; steel melting and iron puddling ; tin plates ; iron and steel tubes ; bolts, nuts, screws, etc., constructional engineering ; jute, slate mining and quarrying ; glass, silk and rayon, carpets ; textile finishing, etc. ; glass bottles ; oilcloth, etc.

in normal years the slack season means only shorter working hours (perhaps less overtime) or reduced intensity of work. Only in years of severe depression is an appreciable number of workers dismissed, suspended or put on short time in the off-season.

(d) Seasonal Variations in other Countries compared with Great Britain.

The extent of seasonal fluctuations in employment has been calculated on the lines used in this book for only one other country, the United States.¹ Since, as has already been shown, seasonal variations in the aggregate figures of employment are unreliable, an exact comparison of results must be restricted to the United States figures. In Great Britain the average number of persons seasonally unemployed in 1924 and 1928 amounts to 2·0% of the insured population.² The corresponding figure for the United States calculated in a similar way is about 5% of the occupied population (excluding mining, transport and agriculture)³ during the post-war period up to 1931. The seasonal pattern in the U.S.A. is somewhat different from that in Great Britain. There are two peaks, in March and October, of approximately equal amplitude; July and December are troughs, December generally being the lowest point of the year.

Less conclusive but suggestive comparisons can be drawn between Great Britain and Germany by using the aggregate figures of unemployment. Average seasonal unemployment can be calculated by taking for each year the average difference each month

¹ S. Kuznets. *Seasonal Variations in Industry and Trade*.

² See Table II.

³ S. Kuznets, *op. cit.* p. 354.

between actual total unemployment and unemployment in the lowest month. In Great Britain average seasonal unemployment among insured persons, worked out by this method, amounted during 1925-32 to 0.8% of the insured. In Germany the corresponding figure, using the Trade Union unemployment percentages, was 3.6% unemployed and 3.4% as the equivalent, in terms of complete unemployment, of the short-time being worked.¹ The seasonal pattern in Germany shows a steady rise in employment from January to September and a fall from September to January. The relatively slight seasonal fluctuation in the aggregate British figures as compared with those of Germany is to be explained by the fact, already discussed, that in Great Britain the seasonal peaks and troughs of individual industries are so widely distributed over the year that they largely compensate for each other. In Germany, on the other hand, there is a considerable predominance of industries with peaks in summer and troughs in winter; consequently the Germany aggregate figures show a very marked seasonal variation.

This difference is evident from examination of the number of persons attached to the principal seasonal industries for which comparable figures are available in Germany and Great Britain.² In Germany, all the groups—even mining and textiles, neither of which, however, shows more than slight seasonal fluctuation—are busy in summer and slack in winter.³ In Great

¹ The figures used are those published in the *Konjunkturstatistisches Handbuch* 1933. The average percentages unemployed are weighted according to the numbers occupied in each industry in 1925.

² See Table VII.

³ The *Vierteiljahrsheft zur Konjunkturforschung*, 8 Jahrgang, Heft 2 (October 1933) Teil A, p. 95, gives charts (but not figures) showing the seasonal fluctuations (deviations from moving average of unemployment figures) in important industries.

Britain, on the other hand, the stone and slate, etc., industries, motors, clothing and building are busy in summer, but mining and textiles, both of which are relatively more important in Great Britain than in Germany, are busy in winter and slack in summer.

TABLE VII.—NUMBERS ATTACHED TO CERTAIN SEASONAL INDUSTRIES IN GREAT BRITAIN AND GERMANY

GERMANY 1925 Census			GREAT BRITAIN 1933		
	Number occupied (ooo's)	per cent. of total		Number Insured (ooo's)	per cent. of total
Mining	847	4.4	Coal, Iron, Lead, Tin and Copper Mining	1,039	8.1
Stone and Earth Industries	687	3.6	Stone and Slate, Clay, Sand, etc.	74	0.6
Automobiles	87	0.5	Motor Vehicles	262	2.0
Clothing	1,590	8.3	Clothing	614	4.8
Building	1,708	8.9	Building and Public Works	1,161	9.0
Textiles	1,207	6.3	Textiles	1,246	9.7
Total ¹ Occupied	19,102	100.0	Total Insured	12,883	100.0

¹ Omitting Agriculture and Forestry, Domestic Service, and Administration.
Source: *Statistisches Jahrbuch für das Deutsche Reich*, 1932, p. 20.

The difference between Great Britain and the United States cannot be accounted for in the same way since the method of calculation is that of adding the variations in individual industries and compensation cannot therefore occur. The difference must then be due to either or both of the following factors. First, seasonal variations may be greater in the same industry in

America than in Great Britain. This is certainly the case in construction. According to Kuznets, average seasonal unemployment in Construction is from 20% to 22%.¹ In the British building industry it is only 2% or 3% and in public works 1½% to 4½%. This may well be explained by the greater variability in weather conditions in America, where construction and other outdoor activities are more seriously affected by the winter. Comparison for other industries between our results and those of Kuznets is unfortunately impossible because in other industries the latter uses pay rolls as a basis whereas our figures relate to the numbers employed.

The second factor—which cannot, again, be accurately tested—is the possibility that industries with a high degree of seasonality include a larger proportion of the workers in America than in Great Britain.

Reference may be made to the admittedly tentative but interesting "International Index of Unemployment" recently published by the International Labour Office.² The index is based on a number of national indices, compiled for twelve countries (including, as well as the chief European nations, the United States and Japan), and has been calculated for the period 1929 to 1933. The total international index shows a very marked seasonal variation, unemployment being regularly at a maximum in January and February and at a minimum in May and June and again in September and October. The spring and autumn peaks, the winter trough and the moderate summer recession seem to be international features of the seasonal cycle.

¹ Op. cit. p. 354.

² *International Labour Review*, April 1934.

CHAPTER III

CAUSES AND EFFECTS OF SEASONAL FLUCTUATION

WHY do seasonal fluctuations occur? What is their effect on the workers and on costs? Would it be in the general interest to take any particular steps to reduce seasonal fluctuation? In this chapter we shall discuss these questions in general terms. More detailed studies of the problems as they present themselves in particular industries, and the methods by which, if it were thought desirable, seasonal fluctuation might be reduced, are considered in later chapters.

I. THE CAUSES OF SEASONAL FLUCTUATION

The fundamental cause of seasonal variation is, of course, the operation of natural processes which repeat within the time-span of a year a basic rhythm of activities; crops, fruit and vegetables grow, animals breed, the rainfall and temperature change at certain fairly regular seasons. To these natural causes must be added artificial factors, for which man is responsible and which are either independent of nature or which govern the way in which natural fluctuations affect the economic structure. For a more exact appreciation of the factors involved we may classify the causes of seasonal fluctuations as natural and economic; while the economic may again be divided into consumption factors and supply factors.

Natural causes arise from the physical circumstances of the economy. Their effects are sometimes felt

directly, as in the case of agricultural processes, which are the most obvious and generally the most important factors in causing seasonal fluctuations. Their importance varies, of course, in different countries but even countries which are almost wholly industrial must import foodstuffs and raw materials and the seasonal rhythm of imports, of processing operations (such as cotton spinning and weaving) and of distribution will be affected by the rhythm of agricultural activity elsewhere. Sometimes, the effects of these natural factors are felt less directly. Thus the demand for certain kinds of food and for clothing varies at different times of the year; less meat, for example, is eaten in summer than in winter. The consumption of heat and light, in the form of coal, gas or electricity, is substantially greater in winter than in summer. Outdoor work in building and roadmaking is more liable to interruption owing to bad weather in the winter, while some kinds of work, for example outside painting, may be spoilt by rain or frost.

We may describe as consumption factors in seasonal variation those causes which act directly from the consumers' end of the market. Human habits and conventions often exaggerate the effects of the seasonal variations caused by natural processes or even, in some cases, create new seasonal patterns. The clothing industry is a good example. In most climates the materials and styles worn will vary at different times of the year, and there will naturally enough be a tendency for peaks of buying to appear when the seasons change, in spring and autumn. Such changes could, however, be foreseen and the producers would have little difficulty in maintaining total production at a fairly even level all the year round, were it not for the

influence of fashion. Owing to the human institution of fashion, the producers cannot know which of the innumerable styles and colours are likely to sell until the buying seasons come. Consequently they cannot anticipate demand and the seasonality of production is much more intense. The practice of taking summer holidays, too, is responsible for a great increase of activity in seaside resorts. The time of year selected for holidays depends ultimately on geographical and climatic conditions, but the extent of the seasonal demand for the services of hotel servants and boarding house proprietors depends on whether people spread their holidays over the summer or are accustomed (perhaps because of school and industrial holiday arrangements) to concentrate on a short season. Some holidays, such as Bank Holidays and Christmas, are even less directly affected by natural causes; the seasonal increase in the employment of shop assistants before Christmas is the result of historical and not natural factors.

Lastly, there are those causes of seasonal variation which we have called supply factors and which arise at the producers' end of the market. Such matters as the organization of industry and of labour and the extent of technical development govern the working out of seasonal variations. Industrial organization affects the seasonality of production in several ways. The extent to which producers can stabilize production of a commodity for which demand varies seasonally depends partly on whether they can afford to anticipate demand by carrying considerable stocks. In general, small firms are less likely to be able to finance stocks than large firms. Again, though we have classed fashion changes among the factors for which consumers

are responsible, it is evident that producers (and distributors) can stimulate or discourage the public demand for constantly changing styles and fashions. In general, the products of a highly competitive industry are likely to be subject to fashion changes more than those of a monopolistic industry. The state of the labour market is another very important factor. Substantial seasonal variation implies the existence of a reserve of labour always available at the busy season but not retained for the rest of the year. If there is a scarcity of labour, employers will tend to do what they can to reduce the fluctuations of production and to keep their staff regularly employed. Otherwise workers dismissed at the end of the busy season may not be available when they are wanted again. A large reserve of unemployed workers, on the other hand, makes it unnecessary for the employer to take the trouble of trying to stabilize his activities, and encourages him to exploit the pool of casual labour. This inducement to seasonal operation arises especially when the labour required is semi-skilled or unskilled. Technical progress in the form of increased mechanization, generally dispensing with the need for special skill and long training, thus facilitates seasonal working.

Organization of the labour market, by an efficient employment exchange system for example, may have significant effects on seasonal industries. The reserve of labour is made more mobile and the employer can draw on a larger field. Such factors may stimulate irregular working; there is a distinct possibility that improved organization of the labour supply may encourage employers to lay off temporarily more workers. On the other hand, organization of employment exchange facilitates the dovetailing of seasonal

occupations and reduces the risk of a shortage of labour in some occupations occurring simultaneously with a surplus of suitable applicants in others.

In nearly every seasonal industry it will be found that more than one of the three groups of causes analysed are at work. In nearly all cases, the fundamental cause of seasonality is a natural cause, but in most industries the extent to which natural factors make for seasonality of operation is determined largely by the character of the demand or the human organization of supply. It is not, therefore, possible to classify seasonal industries in groups according to the reasons for their seasonality. But this analysis of the causes of seasonal fluctuation may prove useful for at least two reasons. In the first place, it should assist any forecast as to probable future tendencies. We might be able to say, for example, that substantial increase in the average size of firm in a particular industry is likely to reduce the seasonal fluctuations. In the second place, this analysis should help us to discover how far seasonal fluctuations could be reduced, if such a reduction were thought desirable. For example, the concentration of the demand for servants in seaside hotels in the summer months or of that for hop pickers in August and September cannot be seriously affected by human intervention. On the other hand, the seasonal fluctuation in the radio industry is partly due to the fact that listeners use their sets more in winter than in summer, but is intensified by the rapid change of models which make listeners most anxious to buy sets when the new models have just appeared. The first factor arises from climatic conditions and can hardly be altered. But the second is largely due to the competitive organization of the industry; a reduction in seasonality

could undoubtedly be achieved by more standardization of the product.

2. THE EFFECTS OF SEASONAL FLUCTUATION

The practical economic problem of seasonal variation is the problem of using to the full the factors of production. Irregular operation means that the plant and the labour force must be sufficient to deal with the peak output and that some of the plant and some of the workers must be maintained during a great part of the year without being employed.

Seasonal fluctuation in the use of plant in Great Britain cannot be measured because of the absence of statistics of monthly production. A calculation of the rate of utilization of plant in the United States has, however, been made¹ and suggests that the amount by which actual use falls short of the maximum is very much greater in the case of plant than in that of labour. The average monthly percentage by which actual use of plant falls short of the use at the seasonal peak is estimated at 12% in manufacturing industries. The average monthly percentage by which employment of labour falls short of employment at the seasonal peak is 4%. It is not, of course, possible to say with certainty that the same relation exists in Great Britain between the excess plant capacity and the excess labour required to support seasonal fluctuations. The conditions governing the relation are, however, independent of geographical situation.

Seasonal variations in employment are, then, less than the corresponding variations in the amount of

¹ S. Kuznets. *Seasonal Variations in Industry and Trade*, pp. 348 and 354. Variations in the use of plant are measured by the differences between output in particular months and output at the seasonal peak

work done. This is partly due to variations in hours of work but it is probable, too, that in many industries the hourly output per head of labour varies with the proportion of plant capacity in use. A great many workers in most factories are, as it were, "overhead" workers: the number employed, that is to say, does not vary with the production of the factory but is constant whatever the output. The productivity of those workers is consequently only at its maximum point when the capacity of the factory is being fully utilized.¹

Seasonal irregularity of production, then, leads to high overhead costs as the result of a low rate of utilization of plant and because productivity per head is lower than it would be with regular full time working. This naturally affects some industries more than others. In building, for example, overhead costs are in any case low because little mechanical equipment is required. In the motor and clothing industries, on the other hand, overheads are a very important element in costs.

Irregularity in the employment of labour is likely to lead either to an excessive surplus or else to a shortage of labour. In some industries (for example, building—

¹ Statistics of hourly output per head are not easily found but two examples may be given: in coalmining the *Quarterly Summary of Output, etc.*, issued by the Mines Dept. gives average output per man-shift worked. Comparison of quarterly output per man-shift with total output shows that the two series move together. During the years 1924-34 (omitting 1926) output per man-shift in the second and third quarters was on the average from 2 to 2½% below the figures for the third and fourth quarters. The actual figures are:

		1st Qr.	2nd Qr.	3rd Qr.	4th Qr.
Average output of all workers per man-shift worked 1924-34 (cwts.)	...	21·2	20·7	20·7	21·1
Average total output (million tons)	...	60·0	54·5	53·0	58·6

The second example is derived from figures supplied by a tyre manufacturer. These show that output per worker per hour, during 1931-33, was at the seasonal trough about 6% lower than at the seasonal peak.

especially painting—and motors) the existence of seasonal irregularity, with the consequent chance of occasional casual work, attracts to the trade a greater number of workers, especially unskilled workers, than can be fully employed even at the peak. Thus there is a considerable amount of unemployment all the year round. In other industries, where the potential reserve of labour at current wages is not great (notably sections of the clothing trades), the reverse happens: owing to the irregularity of employment workers fail to enter the trade in sufficient numbers to support the demands of the busy season. Consequently there is in this case a scarcity of labour at the peak period, though there may be considerable unemployment during the rest of the year. The improbability of the labour supply adjusting itself exactly to the seasonal needs of the industry is increased by the specialization of workers in most seasonal trades. It is a common occurrence for a shortage of some workers (probably skilled workers) to occur while there is a heavy surplus of unemployed persons in other occupational grades of the same industry.

The consequences of seasonal irregularity in the use of plant and labour may be compared with those of cyclical movements. The amplitude of cyclical fluctuations is in most industries, no doubt, much greater than that of the seasonal swing¹ but the qualitative effects are less easy to compare. Cyclical depression

¹ Even this statement is not true in all cases. In the tailoring industry, for instance, the difference in average numbers employed between 1929 and 1930—the latter being the year in which average employment was lowest during the depression—was some 3,000. But the difference in employment between the peak and low months (May and January) of every year averages some 15 to 20,000. In tailoring the quantitative effect on employment of a world depression is very much less than the effect of the regular seasonal slackness.

brings mass unemployment, reduced standards of living and health, bankruptcies and loss of capital, political instability and a long train of consequences too familiar to need enumeration and too serious to require exaggeration. The effects of seasonal fluctuations are less dramatic and less evident, but it is at least doubtful whether they may not be almost as serious. To the worker, seasonal variations mean an uncertain and irregular income and casualization of his employment. It is generally believed that full-time weekly earnings are high in trades subject to seasonal fluctuation to compensate for the irregularity of employment. It is probably impossible to prove whether this is in fact the case, because of the difficulty of comparing different occupations in respect of skill and other factors. But even if earnings are high the worker cannot easily protect himself against the risk of seasonal unemployment ; in most seasonal industries only a minority are discharged in the slack season, and the worker cannot always know whether he is to be among the unfortunate minority or the more favoured majority. Since, moreover, the exact limits of the season are rarely definite it is extremely difficult for him to make the necessary provision. The risk of seasonal unemployment is therefore an uncertain one ; the worker, his fortunes fluctuating from month to month, and his position one of constant insecurity, is likely to fall into the habit of hand-to-mouth existence. To the firm, seasonal fluctuation means that the plant must be capable of dealing with a peak load only attained for a few weeks in the year. Most of the time, the plant is producing well below capacity and overhead costs per unit of output are thereby increased. Since many of the workers are dismissed at the end of the season, the

labour turnover is high, only a small proportion of the workers are permanently attached to the firm, relations between employer and workers are likely to be difficult, and the cost of training and familiarizing new workers with the firm's methods is probably high. Since the volume of sales is irregular and uncertain the employer, like the worker, is probably living from hand to mouth.

While cyclical depressions only occur some half dozen times during a generation, seasonal fluctuations recur every year and are therefore regarded as persistent and permanent characteristics of the economic system. Being familiar, they are considered to be inevitable. But there are in effect many methods by which the serious consequences of seasonal fluctuations can be lessened and the *fluctuations themselves reduced*. These methods are partly matters for outside governmental intervention and policy, but are largely concerned with the internal organization, administration, and planning of industry. They are, therefore, less exciting and sensational than many proposals for the avoidance of cyclical depressions. At the same time it is probably a great deal easier to reduce seasonal fluctuations than to make any great impression on the trade cycle. The causes of seasonal disturbance and the possibilities of the different policies suggested are more certain and more manageable than the causes and cure of world slumps. The necessity for international co-operation does not arise and the problems can usefully be approached by small scale experiments.

3. THE CASE FOR REDUCING SEASONAL FLUCTUATIONS

It appears, then, that there is a strong case for the reduction of seasonal variations, in order to reduce

costs and to increase the regularity of employment in industries subject to these fluctuations. It may, however, be thought that the reduction of seasonal unemployment would simply increase long period unemployment ; that although those who are employed in these industries would work regularly instead of seasonally, many who at present work occasionally would never be employed at all. The same sort of problem arises in casual occupations such as dock labour ; many dock workers are opposed to regularization because the casual system is at least a rough and ready way of spreading the available employment over a large number of men.

Conditions in the labour market, however, are not so fixed and rigid that the displacement of seasonal workers necessarily implies that there is no prospect of their finding work elsewhere or that they can only find work by displacing someone else. Moreover, if we are correct in maintaining that the reduction of seasonal fluctuations would reduce costs, then increased output and a higher *average* level of employment should follow. It is probable, indeed, that reduction of the numbers seasonally unemployed would lead to some increase of the numbers wholly unemployed. But development of the social services—desirable on other grounds—could mitigate this effect ; there are many children of fourteen and old people seasonally employed who would not be seeking employment at all if the school leaving age were raised and old age pensions adequate ; there are many married women who work for a part of the year because their husbands are unemployed.

There are some industries in which a policy of stabilization—even if it were practicable—might not be

regarded as having any great social advantage. Coal mining and cotton are examples of industries subject to seasonal fluctuation which might be placed in this class. Here are to be found enormous surpluses of labour ; the industries are highly concentrated and there is practically no prospect at present of the adults, at least, transferring in very large numbers to other districts. The raising of the school age and the complete elimination from industry of workers over sixty or sixty-five would, no doubt, be valuable but would only touch the fringe of the problem. The concentration of employment on a few workers could in such circumstances mean only permanent unemployment for many who have families to support and who have little chance of finding work elsewhere. In these industries there is a better case for the spreading of what employment is available over as large a proportion of the workers as possible by regular short-time working and similar expedients. Organized short-time is, indeed, general in both the coal mining and the cotton industries.

CHAPTER IV

THE MOTOR AND ASSOCIATED INDUSTRIES

I. THE ACTUAL SEASONAL VARIATIONS IN EMPLOYMENT AND PRODUCTION

THE purpose of the present chapter is to analyse the seasonal fluctuation in an industry—or, more accurately, a group of industries—which may be regarded as representative of the newer and expanding trades of Great Britain. The group with which we are concerned includes the manufacture and repair of motor cars, commercial vehicles, buses, motor cycles, pedal cycles and aircraft, and of many accessories and component parts. In June, 1934, over 271,500 insured persons were employed in the group, the number having increased by over 43% since 1923. The motor industry must now take its place among the half dozen principal manufactures of the country.¹

It is proposed to state first the bare facts of seasonal variation—so far as they can be discovered—in production and employment. Secondly, some of the causes of this variation will be brought to light ; it will be shown how not only the nature of the demand but also the methods of organizing and operating the industry are responsible for fluctuation. Lastly the prospects of seasonal variations being reduced in the future, and the methods that might be adopted to secure this reduction, will be discussed.

¹ In 1934 the only manufacturing industries employing more insured persons than the motor industry were coalmining, general engineering, cotton, printing and publishing, and building.

The seasonal curve of numbers employed¹ varies between about 2% above and 2% below the moving average. The curve is very regular both as to pattern and amplitude from year to year, in spite of the marked trend accounted for by the expansion of the industry up to 1930 and of the severity of the depression from 1930 to 1932. The beginning of the season is in the early autumn; about August the new season's models are exhibited to the dealers, who begin to place their orders. Work starts on these and further orders are given when the new models are produced for public inspection at the October Motor Show. This secondary autumn peak comes to an end after December, and for the next month or two employment drops or ceases to increase. In February or March starts the principal peak of the year, when the public demand for cars begins with the spring. The boom gathers strength and reaches its highest point in March or April. Thereafter employment falls off rapidly to its trough in the late summer. There has been a distinct tendency for the secondary autumn peak to increase in importance during the period covered, indicating a certain relative expansion of autumn car purchases.

With the marked seasonal variation in the motor industry is associated a consistently high level of total unemployment. The monthly average from 1924 to 1929 was between 7% and 9% each year and was never less than 6.7% (1925).² From 1924 to 1929, unemployment was from 8% to 11% in August or September, at the seasonal trough, and from 5% to 6% at the peak

¹ See Appendix III.

² The figures are given in Table I which also shows the highest and lowest monthly unemployment percentages in each year until 1930, since when the normal seasonal swing in the unemployment percentages has been smothered first by the rising and then by the falling trend of unemployment.

in April or May. It is notable that in no month was unemployment ever less than 5·0% (April, 1929), even at the busiest time of year.

TABLE I.—MOTOR, CYCLE AND AIRCRAFT INDUSTRY.
UNEMPLOYMENT, 1924-29

	Average monthly un- employment as per cent. of Insured	Highest monthly unem- ployment as per cent. of Insured	Lowest monthly unem- ployment as per cent. of Insured
1924	8·2	10·5 (Sept.)	6·5 (April)
1925	6·7	7·6 (Aug.-Sept.)	5·6 (May)
1926	8·6	10·9 (Aug.)	5·6 (April)
1927	7·2	9·2 (Sept.)	5·4 (May)
1928	7·5	11·1 (Aug.)	5·7 (March)
1929	6·9	9·3 (Sept.)	5·0 (April)

For much of this unemployment seasonal variation is responsible. A method of estimating the proportion of unemployment in an industry which may be attributed to seasonal variation was set out in Chapter II,¹ and according to that method of calculation average seasonal unemployment in the motor industry in 1924, 1928 and 1932 represented respectively 1·0%, 1·4% and 1·4% of those insured. Average total unemployment was in those three years respectively 8·2%, 7·5% and 20·5%. The average proportion of total unemployment which can be attributed to seasonal causes was, therefore, 12% in 1924, 19% in 1928 and 7% in 1932. Apart from years of severe depression, when the proportion falls, we can say that seasonal fluctuations

¹ p. 19.

account for from 10% to 20% of the industry's unemployment problem.

So far we have dealt only with seasonality in the motor industry as a whole, but there are important differences between the various sections of this industrial group. Figures of employment in each branch are not available but it is possible to make some estimate of the fluctuations in output. Comparison of the results with the employment figures brings out two important points: the seasonal pattern, firstly, is similar in the different branches of the industry, though the amplitude of fluctuation varies considerably. Secondly, production in all branches for which statistics are available is subject to a seasonal variation of much greater amplitude than that shown in employment.

Production of cars and of buses and commercial vehicles can be estimated from the registrations, adding exports and deducting imports. The interval between production and sale (when registration generally takes place) is normally very short since stocks of completed vehicles are hardly ever held for any length of time. A time lag must, however, be allowed for in dealing with imports and exports.¹ In the case of motor-cycles stocks are more extensively held² and the interval between production and sale varies widely at different times of the year. Consequently registration

¹ Imported cars are rarely imported complete; most often the chassis is fitted with its body in Great Britain, so that an average time-lag of about one month ensues between import and registration. Thus to get home production, from the registrations of any particular month the imports of the previous month are subtracted. There is generally a lag of about a fortnight between the production and export of cars for foreign markets, so to the registrations of each month half the exports of that month together with half those of the following month are added to obtain home production.

² See p. 78.

figures supply the nearest approximation to motor-cycle production that can be made, but because of stocks the former undoubtedly exaggerate the seasonal fluctuations of the latter.

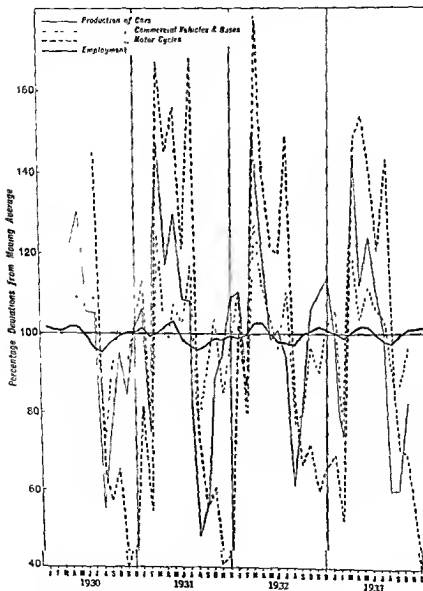
The seasonal variation is greatest in the case of motor cycles and, even if production figures could be used in place of registrations, would almost certainly be greater than the variation in the output of other vehicles. The seasonal pattern takes the form of a very marked peak from March to July, while other months show low figures. The combined curve of commercial vehicles and buses (necessary because the import and export statistics do not separate the two classes) conceals an important difference.¹ The production of buses is very seasonal, being concentrated largely in the spring and early summer, while that of commercial vehicles, though it fluctuates considerably from month to month, does not show a regular seasonal pattern apart from low figures in August and September. Chart 1 shows the monthly production (or, for motor cycles, the registrations) from 1930 to 1933 calculated as a percentage deviation from the moving average to bring out the seasonal element. For comparison, the seasonal movement of the employment figures for the same months is set out and it will be seen that while employment varies from 2% above to 2% below the moving average, motor-cycle registrations vary from 80% above to 60% below, car production from 50% above to 50% below and commercial vehicle and bus production from 30% above to 20% below the moving average.

Three branches of the industry remain—aircraft, pedal cycles and garage and repair service. About

¹ This can be seen from examination of the registration figures.

CHART I

SEASONAL VARIATIONS IN PRODUCTION OF MOTOR VEHICLES AND IN
EMPLOYMENT IN THE MOTOR, CYCLE AND AIRCRAFT INDUSTRY



21,000 persons¹ were employed in aircraft manufacture in 1930 but there is no seasonal fluctuation. In the case of pedal cycles the seasonal fluctuation of output seems to be of about the same amplitude as that of motor cycles ; production is, again, at its height in the spring but there is only a very slight secondary peak in the autumn. Garage and repair service is a very important section of the industry and probably employs over 100,000 workers.² The seasonal fluctuation in employment cannot be directly estimated but it seems that this branch of the industry is less subject to variation than manufacturing. The majority of garages employ only a very small number of workers and even in slack times it would often be impracticable to dismiss men. Since repairing and service account for over a third of the motor industry, their relative stability explains in part why employment in the industry as a whole should fluctuate so much less than production. Moreover, what seasonal fluctuation exists takes the form of a busy period throughout the summer and a slack season through the winter ; the spring and autumn peaks and the summer trough of motor manufacturing would not appear in employment in repairing. Conditions in this important branch therefore have the effect of considerably reducing the fluctuation in the figures for the whole industry.

¹ See *Census of Production 1930*.

² According to the *Census of Production 1930* there were 45,000 persons engaged in Motor and Cycle Repairing in firms employing over ten persons. But there were 63,000 employed in the Motor and Cycle industry in firms of ten or under. Most of these small firms would be engaged in garage and repair service, so that the bulk of their workers may be added to those known to be engaged in Motor and Cycle Repairing. According to the *Census of Population 1931 (Industries)* the number of operatives employed in garages, by dealers in motors and cycles and by dealers in motor spirit, was 101,000,

2. THE CAUSES OF SEASONAL VARIATIONS IN CAR PRODUCTION

The causes of seasonal variation in the manufacture of cars are to be found on the one hand in fluctuations of the demand, on the other in the structure and nature of the industry. There is first, the obvious fact that since driving, even in a closed car, is a great deal more pleasant in the summer than in the winter, the demand for new cars is very largely concentrated in the spring. Some indication of the seasonal variations in the use of cars can be got from fluctuations in the amount of petrol consumed. In January and February consumption of petrol is nearly 20% below the monthly average for the year; in July and August, consumption rises to nearly 20% above the monthly average.¹

TABLE II.—DELIVERIES OF MOTOR SPIRIT TO GARAGE PROPRIETORS AND COMMERCIAL USERS

Deliveries each month as percentages of average monthly deliveries for year; average of years 1927-33.

Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
83.1	80.5	94.0	104.3	100.1	106.9	116.8	116.6	114.6	97.8	93.1	92.2

The steadily increasing proportion of closed cars among new sales seems to have had only a very small effect on the seasonal curve; it is probably in part responsible for the distinct but slight lifting of the autumn as compared with the spring peak in employment.

¹ See Table II. The figures represent deliveries to garage proprietors and commercial consumers. They do not therefore exactly indicate variations in sales on account of varying stocks and because of speculative buying in preparation for price changes.

Two artificial and controllable factors tend to accentuate the seasonal irregularity of demand. Advertising campaigns are generally concentrated on the buying season ; they begin in February and slacken off in the summer. Advertising is naturally most useful and productive at a time when possible car buyers are already prepared by early signs of spring to react favourably to it ; it is probably true, nevertheless, that the concentration of advertising on a certain season tends to accentuate even further the concentration of buying in that season. The second factor is the licensing system. A registration licence cannot be issued for a period less than one month ; consequently a distinct disadvantage is imposed on those who take out their licences after the beginning of a month. This system no doubt causes many car buyers to wait till the beginning of a month (or the 25th of March) before they make their purchases. The present licensing system has a further, and more important effect. Since the amount of tax is not related to the mileage run it becomes a pure overhead cost. Owners are therefore not likely to take out licences when they expect to run only low mileages. Thus both the licensing of existing vehicles and the purchases of new vehicles during the winter are probably lower than they would be were a tax based on mileage substituted for the present registration licence.

It might be expected that export demand would have a stabilizing effect on the seasonal variations of the car market. But examination of the statistics shows that exports are only slightly less seasonal than home sales, and moreover that the seasonal pattern is very similar to that of home sales. The peak of exports comes, it is true, about December or January, when home sales tend to fall off, but the spring is also a good time for

exports and there is a trough in summer at the same time as that in production for the home market. Thus car exports help to keep British manufacturers busy in the winter but intensify the spring peak and do nothing to alleviate the slack summer season. The explanation of the seasonal curve of exports is to be found partly in the geographical distribution of markets,¹ partly in the fact that overseas customers are as anxious as those in the home market to receive up-to-date cars and the time of year chosen for bringing out new models affects the seasonal pattern of exports in the same way as it affects home sales.

Seasonal fluctuation in the industry is then in part due to natural seasonal fluctuations in demand. But granted that the demand for cars must necessarily vary widely at different times of the year, is it necessary for production to follow so closely the variations in demand? Here we are brought up against a fundamental characteristic of the motor trade, a characteristic to whose account we can place a large share of responsibility for the seasonal nature of the industry. The motor industry shares many features with the fashion trades. Production varies with demand partly because it is very expensive to hold stocks of completed vehicles, in view of their bulk, the rate at which they spoil when kept, and the high insurance charges required, but also because the holding of stocks is extremely risky. Designs are constantly changing and this year's unsold models will next year fetch only very modest prices. These continual changes of design are largely, of course, the results of technical progress and

¹ From half to three-quarters of British exports of cars go to New Zealand, Australia, South Africa, India and the Irish Free State. Sales to all of these countries except the Irish Free State reach their peak in the winter but sales to the Irish Free State follow the seasonal curve of the British market.

mechanical improvements in a comparatively new industry, but largely, too, they are due to shifts in fashion and taste in which the motor market resembles the market for clothing more closely than the demand for engineering products.

This element of instability in the products of the motor industry is at once due to, and intensified by, the structure of the industry. The industry consists of three distinct classes of firms. In the first come the great mass production plants, Austin, Morris and Ford, which accounted in 1932-33 for over half the total British output of cars. The second class includes about twenty-five firms with annual outputs of up to 30,000 cars each, and is perhaps most representative of the British motor industry as it has developed in the past. The third group comprises less than a dozen firms, such as Daimler and Rolls-Royce, each producing a few hundred cars and specializing in high quality workmanship and engineering.

Characteristic of the second and to a less extent of the first groups are the intense competition between the firms, the large and constantly changing variety of models produced by each company, and the great fluctuation of sales of each firm's products from year to year. Almost every company has entered the market for almost every class of car. This seems to be due in part to the fact that producers of large and expensive cars, for which the market is becoming saturated, tend to try their fortunes in the production of small and medium-sized cars. In part, too, the multiplication of models is a form of insurance against the vagaries of demand. Almost every firm produces a complete programme of new models each year in the hope that one at least will take the public fancy.

Altogether there are about 140 different models of British make on the market¹ but it is improbable that the sales of more than five exceed 10,000 a year.

The result of these tendencies in the British motor industry—tendencies which show at present no signs of weakening—is that very few individual firms can foresee with any approach to accuracy the demand for any particular model until that demand takes the concrete form of positive orders from the dealers. Consequently fluctuations in output must follow step by step fluctuations not only in the total demand for cars but in the demand for each individual model. The adjustment of production to demand is necessarily a hand-to-mouth matter for the greater part of the industry.

It may be observed in passing that the tendency to serious instability and to wide fluctuations of production in the motor industry has other results besides the exaggeration of seasonal variation. In the first place, constant change of design implies a short life for a large proportion of the plant; machines must be readapted and often changed with the changes of model.² Consequently, depreciation charges tend to be high in the motor industry. In the Austin and Morris Companies, for example, from a quarter to a third of the gross profit goes to maintenance and depreciation.³ This must have the effect of raising costs. Secondly,

¹ *The Autocar* October 6th, 1933. The ten principal groups alone in Great Britain produced in 1933-34 over sixty different models (*Economist*, October 21st, 1933)

² Ordinary machinery in motor engineering is estimated to last ten to fifteen years, "particular purpose" machinery seven to ten years and "special" machinery (used for a single model only) two to five years. See F. G. Woodard, *Proceedings of Institute of Automobile Engineers*, January 1931, p. 250.

³ *Economist*, October 14th, 1933.

the considerable fluctuations from year to year in the fortunes of most companies mean that at any time some concerns are likely to be depressed though others may be doing exceptionally well. This may help to account for the high average level of non-seasonal unemployment noticed on p. 54.

In view of the significance of changing car designs as an element in seasonality, the arrangements made by the industry for the introduction of new models have a most important influence on the pattern of the seasonal curve. It will be remembered that employment and production show a considerable peak in the autumn; this is accounted for by the Motor Show held every year in October. The general practice of manufacturers is to show new cars privately to the dealers about August and then to exhibit them to the public at the Motor Show. Production to fill orders given at the time of introduction of the new models is responsible for the seasonal peak in the autumn. The Motor Show is organized by the Society of Motor Manufacturers and Traders, an association to which all the principal car and commercial vehicle manufacturers, the principal manufacturers of components and accessories and the chief motor agents belong. It has been the aim of the S.M.M.T. to secure the introduction of all new models at the October Show.¹

If there were no Motor Show, the most advantageous time of year to produce new models—from the point of view of sales alone and without consideration of the cost of increased seasonal fluctuation—would probably be in January or February, when the purchases would coincide with the opening of the spring buying season. The seasonal curve would then take the form of a very

¹ The Ford Company holds a separate exhibition of its own at the same date.

large boom in the spring and early summer and a long depression through the rest of the year. In the United States, indeed, where most manufacturers exhibit their new models in December or January, this is what happens. The effect of the organized Motor Show in October is, then, to convert the pattern of the seasonal curve from a curve with a single high peak and a single low trough into the existing curve with its two peaks.

In recent years there has been a tendency for certain companies to race to bring out new models earlier and earlier in the year. Thus Austin produced its Ten-Four in June, 1932, while Standard brought out new models in June, 1931, and July, 1932. A situation in which "1933" models were being introduced to the public in mid-1932 would clearly be unsatisfactory and in 1933 an agreement was secured by the S.M.M.T. among its members. By this agreement, manufacturers were not to bring out their new programmes before a date in August. Nevertheless the practice of announcing new models long before the Show, though limited by this agreement, has now spread to almost every company. Thus by the end of August, 1934, the "1935" programme of all the leading producers had been announced and orders were being accepted. If this practice persists, it will have an appreciable effect on the seasonal curve; the spring season is likely to close earlier, the summer slump to come in July instead of August or September, while the autumn peak will be spread over a longer period and will therefore be less pronounced.

Seasonal fluctuations do not affect to the same extent every class of car or every manufacturer. The demand

for the most expensive cars is the most stable while the car that shows the greatest seasonal variation is the 9-10 h.p. class—at present the most popular class of car on the market.¹

The degree of seasonality in the employment given by different firms varies very considerably, in part as the result of the class of car chiefly produced, in part as the result of deliberate policy. Moreover as we have seen already there are generally a number of firms experiencing a sudden relative increase, often a spectacular increase, in the demand for their vehicles. Such fortunate concerns are often unable to keep up with orders and their output may be up to capacity for almost a whole year. In these cases seasonal fluctuations may be completely eliminated by the upward trend.

A deliberate and successful policy of stable employment has been pursued for some years by the Austin Company. This company, which employed in 1934 over 18,000 workers, produces large numbers of cars in every class ; its most popular product in this country is the 10 h.p. model for which, as we have seen, the demand is particularly seasonal. One reason for this company's stable employment policy may be found in its location. The plant is at Northfield, seven miles from Birmingham, and relatively isolated. Indeed the company itself has built about 4,000 houses near the works. Since engineers in this district would not find it difficult to obtain other employment it is natural that

¹ These conclusions are derived from study of the monthly registration figures for cars of different horse powers. In the United States there is much the same difference between the seasonal fluctuations of different car classes. The demand for high-priced cars is fairly stable while the most seasonal demand is for the low-medium price group. See S. Kuznets, *Seasonal Variations in Industry and Trade*, p. 132.

the company should so far as possible give twelve months work in the year in order to keep its workers together.

The Austin Company has been enabled to stabilize employment by several methods, the possibility being in part due to its own deliberate efforts, in part to the character of the demand for its cars. This demand has often been ahead of the company's capacity; thus some buyers can be compelled to wait at the busiest times. Austin's exports are so distributed geographically that they can to a large extent be concentrated on the slack season. Designs change less from year to year than in the case of any other cheap or moderate-priced cars; this is probably a very important factor since it means that in the slack season more work can be done than by most concerns on those parts and components which are not going to be altered in the next season's model. Fairly extensive stocks of parts and components are therefore held. To a certain extent, even, stocks of completed cars are carried. Another advantage is the size of Austin's output: it is much safer and easier to forecast the future demand when output is measured in tens of thousands than when it is counted in thousands or hundreds. The processes of production, too, are highly specialized and, for the most part, easy to learn. Thus the labour force is to a great extent semi-skilled and can fairly easily be shifted from one department to another—from the assembling of completed cars, for instance, to the making of parts—as the nature of production changes. By using these opportunities to the full, it seems, and with the exception of a small amount of temporary labour recruited in the busiest season, Austin's employ the same number of workers at all times of the year. So far as can be discovered,

no other large company has secured the same stability, but it is worth noticing that the Vauxhall Company, in which the seasonal swing has recently been completely eliminated by the rapid increase in sales, made a point of promising steady and regular employment to the numerous additional workers whom it has been obliged to recruit to its factory in Luton from other parts of the country.

The moderate-sized companies are the most seasonal, but the small companies producing high price cars resemble the mass production firms in that employment in them is relatively stable. Daimler, for example, employed in 1933 about 4,000 workers and this total does not vary by more than two or three hundred, the few who are dismissed in slack months being all unskilled. It is rare, too, to work more than one shift in these works. Stability is made necessary by the fact that an exceptionally large proportion of workers are skilled and it is a matter of some importance to this class of firm to secure and to keep the best craftsmanship available. Moreover the demand for Daimler cars, as has been suggested above, is relatively very stable. The production and testing of new models, though they do not usually differ at all fundamentally from one year to the next, keep the greater part of the staff fully occupied in July and August. In fact Daimler's are accustomed to make in June a certain number of cars for sales (only slightly less than usual) in July and August, since they are busy in those months with new models. A certain amount of the instability and uncertainty which are due to fashion changes in the demand for different kinds of bodywork is shifted by the producers of expensive cars on to specialized body building firms who work for them.

3. THE ORGANIZATION OF SEASONAL EMPLOYMENT

The output of motor vehicles fluctuates seasonally, as we have seen,¹ very much more than employment in the motor industry. How is this divergence to be explained? The stabilizing influence of the repairing and service branch is partly responsible, but other important factors must be considered as well.

The numbers employed and unemployed are no indication, to begin with, of the total number of hours worked. Overtime is regularly worked in the busy season while works may close for one or two days in the week when business is slack. Overtime is, indeed, restricted by the following rules under the Trade Union agreement.²

"The Federations and the Trade Union agree that systematic overtime is deprecated as a method of production and that when overtime is necessary the following provision shall apply, viz. :

"No union workman shall be required to work more than thirty hours' overtime in any four weeks after full shop hours have been worked. . . . In the following cases overtime is not to be restricted: Breakdowns, repairs, replacements, alterations . . . trial trips and *completion of work against delivery dates.*"³

The last clause, allowing unrestricted overtime "for completion of work against delivery dates", seems to open the door to indefinite overtime during the busy season in the case of firms for whose products the demand is greater than the normal output capacity—and in view of the instability of demand this happens

¹ See p. 56.

² Overtime and Nightshift agreement Memorandum of Conference between the Engineering and National Employers' Federations and the Amalgamated Engineering Union September, 1920.

³ My italics

fairly frequently. Such firms may be regularly behind-hand with deliveries for several weeks or even months. Complaints are made that this clause of the agreement is used to destroy all restrictions on overtime working.

Quite apart from overtime or a reduced working week, the normal methods of production used in the industry make it possible to carry out a highly seasonal programme of deliveries and yet, without holding any appreciable stock of completed vehicles, to maintain a curve of employment which is only moderately seasonal. In the first place, vehicles need not be made from start to finish all at once. Every make of car, however rapidly its design changes, comprises a large number of parts which are practically standardized and alter little from year to year. A great deal of work can take place on such parts in the slack summer season in preparation for the following year's cars, even though the exact design of those cars is not finally settled. But the increasing tendency to buy parts from outside firms¹ reduces the possibilities of this method. Second, every company must regularly make a large amount of spare parts for its current and old models. This activity can be carried on in the slack season. Third, in the busy season it is possible to speed up production considerably, quite apart from overtime; it is probable that the output per head *per hour* will be greater in the busy than in the slack season. Fourth, in the slack summer period every firm is engaged on preparing its models for the following year. Experimental work on the new cars will start as a rule about April; as soon as the designs are decided, work must begin on making and setting up new jigs and machine tools, or adapting old ones for the following season's produc-

¹ See p. 81.

tion. Thus the toolroom workers are generally busiest when vehicle production is slack. The proportion of toolroom workers varies greatly in different establishments but the average in the motor trade is said to be about 4%, and is probably increasing. It used to be a common practice in many firms for the toolroom workers to be dismissed towards the end of the year, so that their seasonal cycle of employment was the reverse of that in the motor trade generally but equally marked. The more common practice to-day, however, is for the majority of toolroom workers to be transferred to the production side when the toolroom is not at its busiest, so that these workers suffer relatively little from seasonal unemployment. But methods vary between firms and some find it difficult to transfer toolroom hands to production.

TABLE III.—PERCENTAGE CHANGE IN NUMBERS EMPLOYED OF CHIEF OCCUPATIONAL GROUPS BETWEEN BUSIEST AND SLACKEST WEEKS OF 1928 AND 1933 FOR ONE FIRM

	Actual numbers employed end 1933	Percentage drop in numbers employed between busiest and slackest week	
		1928 %	1933 %
Skilled	866	27	25
Semi-skilled	648	31	29
Seasoned	170	20	25
demar.	146	26	28
and in	43	1	37

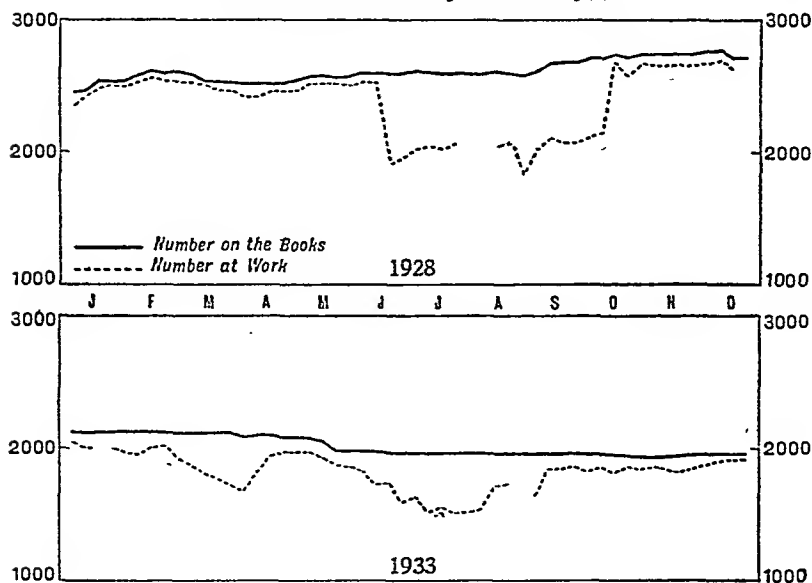
¹ See p. 56

² Overtime at the Engineering and Engineering Unions. In big firms all classes of workers except the and clerical staff, who are unaffected,

suffer equally from seasonal unemployment. (See Table III.) In the small high quality firms, where seasonal fluctuations, as we have seen, are less conspicuous, efforts are made to keep the skilled staff together, though some of the less skilled may be dismissed in slack times.

CHART 2

NUMBERS OF PERSONS AT WORK, AND ON THE BOOKS, WEEKLY IN A MOTOR FACTORY, 1928 AND 1933



NOTE.—Intervals in numbers employed represent holidays

The methods used in organizing work in the slack season vary from firm to firm. In most cases production slows down gradually after the spring and picks up again slowly in the early autumn. In other cases the slack period begins and ends suddenly. Chart 2 illustrates this difference. The figures were provided

by the same firm, and refer to the years 1928 and 1933. In the first year, work went on with the full complement of men till the middle of June, when approximately one-fifth of the workers were laid off. After eighteen weeks about the same number were taken on again in one week. In this firm short time was worked in the intervening slack season, about two-fifths of the workers being given three days' or a week's work followed by three days' or a week's "play"; the position was then that three-fifths had nine weeks of alternate work and "play" from June to October. Practically the whole labour force remained "on the books" all the year. In 1933, the second year illustrated, the fluctuation was gentler, but the summer depression was deeper (nearly 25% below the maximum employment) and a secondary trough in March and April was much more serious than in the earlier year.

The majority of motor firms dismiss a proportion of their workers for the whole of the slack season, but a considerable number work a system of organized short time like the firm described above, alternating weeks or half-weeks of employment and unemployment for a larger proportion of workers. This practice appears to be spreading, and granted the existence of seasonal depression and the impossibility of obtaining other work, is to be preferred to long periods of complete unemployment. The extent of short time working can be seen from a comparison of the average number of hours actually worked in the motor industry at different times of the year. The Ministry of Labour's special enquiry into hours in 1924¹ related to four

¹ *Ministry of Labour Gazette*, September, 1926. Later enquiries referred only to a single week in October

selected weeks in January, April, July and October. The results were as follows :

*Average Hours actually worked in the Motor Vehicle
and Cycle Industry*

Week ended	19th Jan.	12th April	12th July	18th Oct.
Firms employing 25 or more workers	47·2	49·1	47·0	46·5

The actual proportion of workers on short time was given for the same four weeks as 3·6%, 1·7%, 1·4% and 4·6% respectively, but while those on short time lost, on the average, 8·9 hours in January, 6·0 hours in April and 7·9 hours in October, 13·8 hours were lost by those on short time in July. A varying working week naturally means irregularity in income.

The motor industry is unlike certain other seasonal industries (notably the clothing trades) in one important respect. Every motor firm endeavours to keep together the same staff of workers from year to year. In the slack seasons the names of most of those workers who are dismissed for a long period are kept on the firm's books ; on being dismissed they are generally informed that they will be sent for later. Sometimes, indeed, this practice leads to abuse when workers are told that they will be required later and may never be sent for. Thus a fringe of casual or semi-casual workers is maintained but only employed at the busiest times ; yet the prospect of occasional employment is good enough to prevent their seeking work elsewhere.

The great majority of motor firms (nearly all of any importance in Coventry) use the employment exchange

machinery for filling their seasonal and general requirements. Sometimes the exchange is used to get in touch with a particular individual whose services are once more needed after a period of slackness ; sometimes new workers are required. In the latter case workers are often required very quickly and the Coventry exchange declare that on the average, within twenty minutes of the notification of a vacancy, they will have three candidates for employment at the employer's premises. Such perfection of machinery may indeed have a casualizing effect because employers who know that demands for labour will be answered at once, with no more trouble to themselves than a telephone call, need not maintain a staff (at least, of unskilled or semi-skilled men) greater than is required for the immediate work in hand.

The few firms who do not use the employment exchange generally maintain their own labour offices, in which records are kept of all workers previously employed and of applicants who may be needed if work increases. One of the largest Coventry firms duplicates in this way a large part of the activities of the exchange. The complaint is made that the exchanges do not send the best type of worker, though their invariable policy is to send the best man available when a vacancy is notified and the officials in a town like Coventry, specializing on motor engineering, have ample experience of the requirements of the industry. Even if an employer wants to employ the same man year after year, he can keep a record and use the exchange simply to recall the man when required. Indeed many employers use the exchange chiefly for this purpose, for transference of workers from firm to firm is not extensive. In the clothing trades, too,

objections are often heard to the use of the employment exchanges,¹ but in this case employers are often anxious to obtain not unemployed persons but workers already employed in other firms. Since workers in the motor industry are accustomed to remain attached to the same employer for long periods, the practice of "poaching" labour already employed elsewhere does not exist to any appreciable extent.

4. SEASONAL FLUCTUATIONS IN THE PRODUCTION OF OTHER VEHICLES

The production of other vehicles than cars—of commercial vehicles, buses, motor cycles and pedal cycles—is subject to many of the influences making for seasonality that affect car manufacture, but there are some important differences which cannot be disregarded. The output of commercial vehicles shows, we have seen,² little trace of seasonal variation though there are considerable fluctuations of an irregular kind from month to month. Changes of design are far less frequent than in private cars; an exhibition is held every two years though the production of new models is not confined to these occasions.

Bus production, on the other hand, is very seasonal. Production is, as a rule, to order and the requirements of buyers may vary considerably. Not only the owners of coaches used mainly for summer excursions, but also the regular bus lines tend to concentrate their purchases on the spring. For example, in 1932, which was a representative year, registrations of new buses fell away from 760 in March to 90 in November. In

¹ See p. 154.

² See p. 57.

addition, the exports of commercial vehicles and buses are generally highest in the spring.

Commercial vehicles are very commonly made by companies also producing cars.¹ Since in such cases the engines are generally interchangeable, the production of commercial vehicles tends to stabilize the total output and employment of these companies. Some companies produce both commercial vehicles and buses;² again, the relative stability of the former will compensate in part for the seasonal fluctuation of the latter.

The problems of meeting seasonal demand in the manufacture of motor cycles are similar to those already described in car manufacture. There is again a very wide variety of products and continual changes of design, while customers tend to show strong individual preferences which render standardization difficult. But there are two important differences, associated with the structure and policy of motor cycle firms, which make it more easy for them than for car manufacturers to reduce fluctuations in employment and output. In the first place, although there are a very large number of motor-cycle manufacturers, most of them producing only a small number of cycles, a great number do little more than assembling. In particular, the manufacture of engines is concentrated on about half a dozen firms. Many firms buy engines, steel frames, rims, spokes, tyres, carburettors, electrical apparatus and do no more than put the parts together, thus requiring no skilled labour and practically no mechanical equipment. Secondly, it is customary to make motor cycles for stock during the slack winter

¹ e.g., Vauxhall (Bedford trucks), Ford, Morris, Humber (Commer trucks).

² e.g., A. E. C., Leyland.

season. Special arrangements are made allowing dealers to give orders during the winter, payment being deferred till the selling season opens. The dealer will hold the stocks but in this way the cost is shared between manufacturer and dealer.

The output of pedal cycles is as seasonal as that of motor cycles.¹ Again, the fluctuations in production need not exactly reflect those in demand, because arrangements are made for financing the carrying of stocks by dealers. Moreover, cycle manufacturers fill in the slack season by making standardized parts ; most of the turned and pressed metal parts vary little from year to year and can be made for stock after the end of the selling season.

Exports, both of motor and pedal cycles, represent a very considerable proportion of total output but, as with motor cars, are as seasonal as home sales and follow much the same seasonal pattern.

5. SEASONAL FLUCTUATIONS IN ACCESSORY AND SUBSIDIARY TRADES

The majority of motor and cycle manufacturers buy from outside specialist firms a considerable amount of accessory and component parts, both semi-finished and finished, for a great variety of materials and products go to the making of a motor vehicle. On the whole, the big mass production firms tend to be relatively independent of outside specialists ; smaller firms vary widely in the degree to which they are self-contained, but the manufacturers of the high quality cars tend to

¹ Many motor-car manufacturers were originally producers of pedal cycles and some added cars to their output largely as a sideline which might help to even out the seasonal fluctuations of the cycle industry. Webb and Freeman, *Seasonal Trades*, p. 113.

resemble the mass production plants in that they make a large proportion of the component parts used. On the average, motor and cycle manufacturers buy from outside firms nearly £500's worth of goods for every £1,000's worth of completed motor vehicles or cycles produced.¹

We propose to enquire in this section into the question of how far the seasonal fluctuation in the output of motors and cycles is passed on to the producers of accessories and component parts. The concerns supplying accessories and components may be divided into two classes. First there are those which provide semi-finished materials such as forgings, stamped and pressed metal parts, and castings, though in some cases the larger firms have their own foundries. With these may be grouped the firms supplying machine tools. Such outside firms do not as a rule concentrate on meeting the requirements of the motor industry but supply a variety of trades.

The second group of firms with which we are concerned consists of those which supply finished parts and accessories. Radiators, springs and screens are generally bought, though the biggest firms, including Austin and Vauxhall, now make their own radiators. Electrical equipment, including batteries, lighting and

¹ See *Census of Production 1930, Motor and Cycle Industry*. The cost of "materials used" (which includes the cost of finished goods bought from other industries) is given as £64 millions, while the net output of the Motor and Cycle industry is £45 millions. This figure of £64 million must, however, be greatly reduced to allow for duplication since the producers of, for example, Smith's speedometers are regarded as within the motor industry and sell their products to other firms within the motor industry (e.g., Morris). Thus the speedometer will occur in the net output figures of Smith's and the "materials used" of Morris. The *Census of Production* estimates that the extent of duplication was £20 to £22 millions. Thus the value of the products bought by firms in the motor industry from other industries would be about £43 to £44 millions, slightly less than the net output.

starting sets and magnetos, carburettors, plugs, instruments, wheels and tyres are bought from outside in nearly all cases. The firms making these products are almost always specialists, motor accessories being their principal—sometimes their only—line of production. There is reason for thinking that the practice of buying finished parts from outside considerably increased between 1924 and 1930. While employment in the Motor Cycle and Aircraft industry as defined by the *Census of Production* increased by 39%, employment in the same industrial group as defined by the Ministry of Labour increased by only 15%. The most important difference between the two definitions lies in the exclusion by the Ministry of Labour of persons employed in making many kind of parts and accessories. The above percentages thus suggest that employment in firms chiefly making parts and accessories has increased much faster than in firms making motors and cycles. This might well be explained by a tendency for an increasing number of firms to buy parts and accessories from outside instead of manufacturing them themselves. Support for this explanation can be got from the figures of "materials used" in the *Census of Production*. While between 1924 and 1930 net output in Motor and Cycle Manufacturing increased only from £40·6 millions to £45·4 millions, materials used increased from £44·4 millions to £63·7 millions. This, it seems, can only be due to more products being bought from outside ; there has not, of course, been any greater increase in output than that shown by the net output figures, but there has been more specialization. In addition there has been an increase in the number of accessories provided with the ordinary car ; such adjuncts as bumpers and traffic indicators have become

standard fittings and must be bought from outside firms.

The motor industry is accustomed to give its orders for semi-finished and finished goods only shortly before they are required. The usual practice is for the motor firm to make with the outside firm a contract by which the latter promises to deliver the "season's requirements" of, say, castings or tyres. The outside firm perhaps knows little more of the probable "season's requirements" of the motor firm than the outside world generally; the motor firm itself, indeed, cannot in most cases forecast its production more than a few weeks ahead. The motor firm periodically makes "requisitions" of the other firm's products. In some cases it will give a regular monthly order, the goods being delivered during the month; in other cases, the accessory or components manufacturers will receive requisitions practically from day to day. It appears that this hand-to-mouth method of working has been steadily increasing and that most motor firms hold only the minimum stocks of bought materials and parts at each point in the production process.

The seasonal nature of motor production must therefore be reflected in the accessory and component trades, though the seasonal pattern in the latter is likely to be a few weeks ahead of that in the former. Moreover many of those factors which we have found responsible for seasonal production in the motor trade operate also in the subsidiary industries. The influences of improving technique and of changing fashions are as important in many of the subsidiary trades as in the motor trade itself. Parts which are not immediately visible to the purchaser are, it is true, often standardized (for example, batteries) and are not subject to the

movement of fashion, though they may be affected by improved technique. The designs of the more conspicuous accessories and components are, however, constantly changing and one manufacturer of instruments gave it as his opinion that changing design is due in about equal parts to fashion and to technical improvement. Moreover each motor company is likely to have its own preferences and a supplier of accessories and components will probably have to provide each of his customers with a slightly different article. Castings and stampings, for example, will vary with each motor manufacturer and with each of his models. This tends, incidentally, to the advantage of the large motor manufacturer who will give his orders on a much greater scale than the small concern. The accessory and components producer will be able to fill the large firm's requirements more cheaply and will, in the event of a sudden increase of demand, probably give preference to the bulk orders of the large firm. The effect of a large and frequently changing variety of design is, of course, that manufacturers of accessories and components cannot easily take the risk of carrying stocks and seasonally fluctuating demand is translated into seasonal production. On the other hand the expense of carrying stocks, which is an important obstacle to more stable output of motor cars, is less felt by subsidiary suppliers ; tyres, instruments, plugs, and the like are valuable in relation to their bulk and spoil in keeping much less easily than motor cars.

The first group of firms, those making semi-finished parts, are able very largely to dovetail seasonal orders for motor parts with the production of very similar goods for other purposes. Thus the effect on employment is practically negligible. Firms belonging to the

second group, making finished parts and accessories, have a more difficult problem. It is important to notice that while the production of cars and semi-finished parts and (though to a less extent) of motor and pedal cycles is almost entirely a man's trade, women play a large part in the production of finished accessories, especially of tyres and electrical equipment.

Many of the firms in the second group are able to maintain a volume of employment which varies only a little with the seasons. This has been achieved in part by making for stock—though it has been shown that there are considerable difficulties in carrying out this policy—in part by making other products. In the case of tyre manufacturers stabilization is reached chiefly by making stock, and by holding it either in the form of crepe or as completed tyres. One important tyre company, indeed, is not unwilling to encourage the practice of hand-to-mouth buying by motor firms since by holding large stocks it can supply sudden and urgent orders without difficulty. Being a very large firm and therefore better able to pursue this policy than its smaller competitors it gains a considerable advantage over them. The number of tyre workers in this firm varies very little¹ but tyre production² is very fluctuating, though the fluctuations are irregular and do not seem to bear much relation to the seasonal pattern of the motor industry. Fluctuations in production are met by overtime and shorter hours (hours varying from sixty to thirty-eight a week). It is interesting to notice that this firm also makes rubber sports goods and that in its Sports Division production and employment are far more seasonal than in the Tyre Division. In the former, indeed, the number of

¹ See Chart 3.

² See Chart 4

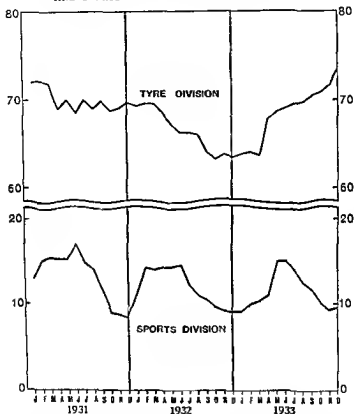
workers at the seasonal peak (May-June) is generally about 70% greater than at the seasonal depression (October to December). Transference of labour between the two sections is, it appears, practically impossible because, although 40% to 45% of the workers in both sections are women, quite different types of labour are required. In the Tyre section the work, in spite of "semi-automatic" machines, is physically heavy and the pay fairly high, the women employed being mainly adults. In the Sports Division the work is light, the pay relatively low, and the workers largely juveniles; the work, being seasonal, attracts those whose wages are a subsidiary contribution to the family income and who are less anxious than the women in the Tyre Division to work all the year round. In this firm the secondary line of production was clearly not introduced in order to stabilize employment or the use of plant.

Firms engaged in the manufacture of small accessories such as speedometers, clocks, direction indicators, thermostats, jacks, pumps, plugs and the like, can fairly easily stabilize production by taking on other lines. Thus S. Smith and Sons, who are the principal producers in this country of most of the articles just listed, experience a strong seasonal demand from the motor industry but make in addition ordinary clocks and aircraft instruments. So although about 70% of their output goes to the motor trade, their total employment only varies between about 2% below and 2% above the average; the seasonal peaks in the production of domestic clocks¹ is from October to December while the demand for motor accessories comes chiefly in the spring.

¹ See Appendix III.

CHART 3

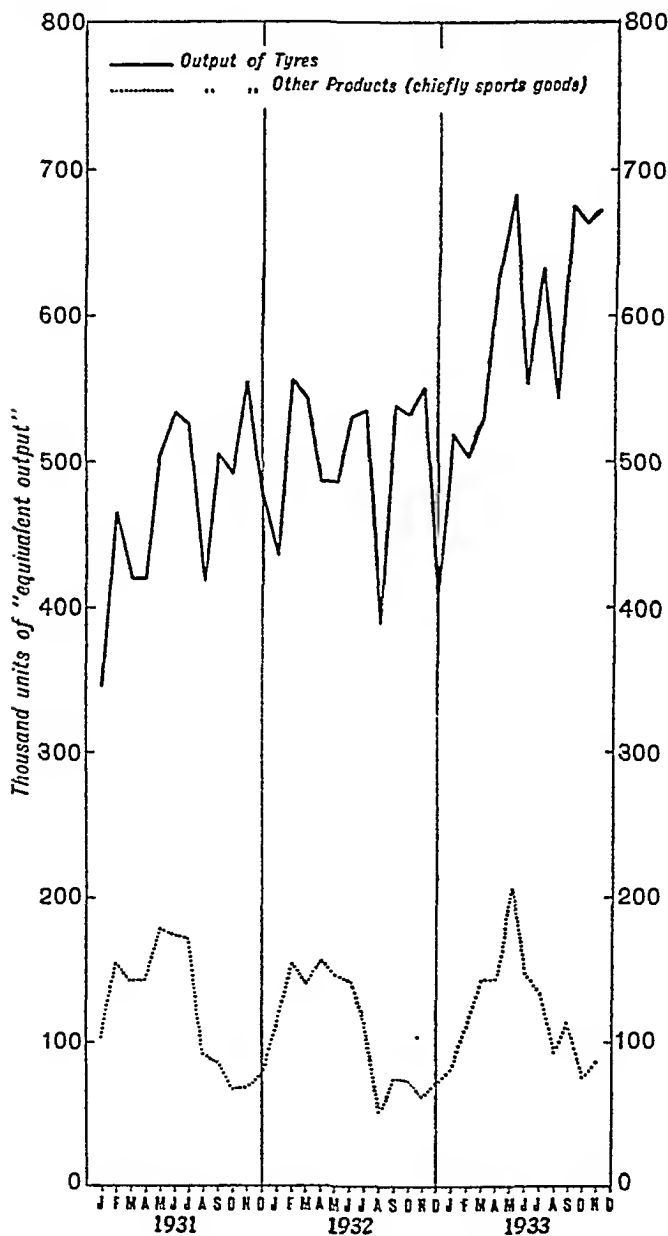
RELATIVE NUMBERS EMPLOYED MONTHLY IN THE TYRE
AND SPORTS DIVISIONS OF A RUBBER FACTORY



In the case of electrical equipment it has been found more difficult to smoothe out the seasonal curve. Production runs ahead of sales by about a month and sales run ahead of motor-car production by about another month; thus the seasonal curve in this industry tends to be about two months ahead of motor output, the busy season extending from about September to

CHART 4

MONTHLY OUTPUT OF TYRES AND OTHER GOODS OF A RUBBER FACTORY



April. In this trade, then, production is almost hand-to-mouth; but opportunities for stabilizing are formed by the partial manufacture of many parts. Equipment can be half made and then stocked ready to be adapted and completed according to the preferences of particular manufacturers.

One firm making electrical equipment has tried in the past to extend its range of products, partly in order to reduce the fluctuations in output and employment. In particular it has manufactured radio apparatus, and at first sight it would appear that a firm with its reputation and experience should be able to compete with a reasonable chance of success. It seems, however, that the experiment failed more than once and the reason suggested is that no firm can give the attention required to more than one kind of business. The probabilities are either that the first-rate men who have specialized in the principal line of production will give a small part—too small a part—of their attention to the manufacture and marketing of the secondary class of product or that the first-rate men will, as before, be drawn to the principal line and second-rate men charged with the secondary products. The outsider may feel that these difficulties are not necessarily insuperable, but the experience of this particular firm is significant and cannot be ignored.

6. THE PROSPECTS OF STABILIZATION

There is no doubt that the motor and cycle and associated industries would benefit considerably were it possible to eliminate the seasonal fluctuations in production. The advantages of more stable employment to the workers apply here as in other trades. The

economies in costs are equally significant, for a very large proportion of the total costs involved in production are independent of the actual amount produced on a particular day and would be appreciably reduced, per unit of output, if production could be organized to secure maximum use of plant at all times. The proportion of these overhead costs cannot be arrived at with any exactness but estimates of a reliable character are available which will give some indication of the position.

The following analysis of costs (excluding capital charges) in motor manufacturing firms is made by Mr. Kerr Thomas.¹ "Materials" includes finished products such as magnetos, radiators, etc., when bought from outside, while salaries are excluded from labour costs.

Size of Firm		Material %	Labour %	Overhead Costs %
Average	..	75	11	14
Large output	..	80	10	10
Small output	..	55	15	30

According to this estimate overheads average between 125% and 130% of labour costs. It will be noticed that differences between firms are considerable. In general both overhead and labour costs diminish while material costs remain the same, per unit of output, as the size of output increases. Thus any advantages to be gained by stabilizing output and reducing overheads would be most felt in the smaller firms, where they are, as we have seen, most difficult to obtain.

The *Census of Production* figures can also be used to make a corresponding analysis; but the Motor and

¹ H. Kerr Thomas. Effect of Automobile Industry on the Midlands. *Proceedings of Institute of Automobile Engineers*, June 1927, p. 630.

Cycle Manufacturing and Repairing industry must be taken as a whole and the figures refer only to the two-thirds of the trade for which returns were made.

			£000	% of gross output
Gross output (free of duplication)	..	..	66-67,000	100
Materials used	..	..	29-30,000	43-45
Wages	..	..	19,800	30
Other costs	..	..	16-18,000	24-27

The Gross Output (free of duplication), may be taken to represent the total amount received by the industry for the sale of its products but this sum must, of course, cover capital charges (interest and dividends). According to this calculation overhead costs (including capital charges) are 80-90% of labour costs. If capital charges were excluded, as in Mr. Kerr Thomas's analysis, the proportion would of course be lower still. Overheads are appreciably less than wages, while in Mr. Thomas's analysis they are considerably greater. The difference between the two estimates is probably to be accounted for by the fact that the *Census of Production* figures include the cycle industry and repairing, in both of which overheads are much lower than in motor manufacturing.

Both calculations, it should be observed, slightly under-estimate overhead costs, because both include all wages as running costs, whereas a certain proportion of workers, such as cleaners, those engaged on maintenance of machines and the like, must be paid irrespective of fluctuations in production and their wages should really be added to overhead costs.

In short, then, the financial advantages of stabilization of seasonal fluctuations would be relatively small

in the repairing section, in cycle manufacturing, and in motor firms with very large outputs, but they would be very considerable in those smaller manufacturing concerns which are a special feature of the British motor industry.

What are the probable tendencies of the near future? Are seasonal fluctuations likely to increase or diminish? There are already at work tendencies making for more stability and others which may well increase irregularity. On the one hand, there is the gradual concentration of an increasing proportion of total sales in the hands of the few large mass-production firms. The largest producers, as the example of Austin shows, can more easily stabilize their output and employment than most of the smaller firms, but it is uncertain whether all the large-scale producers are making serious efforts in this direction. Again, the tendency of many manufacturers to break away from the simultaneous presentation of new models at the October Motor Show and, instead, to bring out new cars during the summer months may increase employment during the summer and reduce the autumn peak. On the other hand, two important factors are likely to increase fluctuations. One is the relative saturation of the market for the more expensive cars, for which demand is fairly stable, and the great development of the light medium car, of 9 or 10 h.p., for which the demand is most seasonal. The second factor likely to increase seasonality is the diminishing relative significance of commercial vehicle production. In many firms the production of commercial vehicles is an important stabilizing influence but unless exports develop on a very large scale there is little doubt that commercial vehicles will continue to represent a decreasing proportion of total output.

On balance, it would seem that the tendencies making for increased seasonality must be weighted more heavily in an estimate of future developments than those making in the direction of more stability. No smoothing out of the seasonal variation is likely to result if existing tendencies work themselves out automatically. A deliberate policy of stabilization on the part of manufacturers is essential if seasonal unemployment is to be reduced. There are several methods which if energetically adopted by manufacturers could result in a more stable rate of output.

The first method is to attack the problem at the consumers' end. It would hardly be possible to alter the purchasers' reactions either to the spring or to the tempting novelties of the October Motor Show. We have seen that the arrangements adopted for the introduction of new models have an important influence on seasonal variations in demand. The British method of bringing out all new models in October certainly results in less violent fluctuations of buying than the American practice of introducing new cars at the beginning of the usual buying season. But if new models were to be put on the market at fairly regular intervals during the year, the result should be to stabilize purchases to a much greater extent. It is interesting in this connection to notice the new policy of the Morris-Wolseley-M.G. group; according to an announcement by Lord Nuffield, this group will in future bring out a series of new models during the year, one of the objects being the levelling out of the production programme.

The peaks of demand might, in addition, be smoothed down by the use of different publicity methods. At present, as we have seen, advertising tends to be

other firms as can afford it will bend all their energies to producing something similar.

This issue goes further than the question of smoothing out seasonal fluctuations. It would appear that there is very little prospect of future reductions in the costs of car production so long as the features just described remain characteristic of the British motor industry. It is true that the average prices of cars and commercial vehicles have been falling fairly steadily from 1924 and earlier; the price index compiled by the Society of Motor Manufacturers and Traders shows a drop of 48% for private cars, and one of 38% for commercial vehicles between 1924 and 1934. Till 1929, no doubt, the fall was due largely to cost reductions made possible by improved technique; but since 1929 the general fall in prices during the slump, and the large increase in the proportion of cheaper cars bought, must be allowed a large share in the responsibility for the price drop.

It seems, then, that some movement in the direction of specialization among firms or of stabilization of design is required not only to smooth out to any great extent the seasonal fluctuations but also to make possible further cost reductions.¹ Without more specialization and a reduction in the number of models, the

¹ See H. Kerr Thomas *Proceedings of Institute of Automobile Engineers*, 1923-4, The Fundamentals of Cost Reduction, p. 476. "It would seem . . . that we have been woefully extravagant in leading the public to suppose that constant changes of design were to their advantage and this policy has now reacted upon us in the form of unnecessarily increased costs—a result which might have been foreseen." Mr. Thomas also points out that both the English chassis with the highest reputation (presumably the Rolls-Royce) and the cheapest car in the world (Ford T Model) remained practically unchanged from 1911 to 1924. A comparison with America is instructive: while the ten principal British groups produced in 1933-34 over sixty different models the ten largest United States concerns, with an output nearly twenty times that of Great Britain, made in 1930 only about eighty models.

considerable economies of mass production cannot be extended.

Although anything approaching standardization of complete vehicles can hardly be expected at the present time, there is undoubtedly room for further standardization of certain accessory and component parts of motor vehicles. This would make it possible for motor firms to manufacture more extensively for stock in slack selling seasons and would greatly assist the producers of accessories and components to avoid the necessity of working on a hand-to-mouth basis. A great deal of standardization work is already performed by the Institute of Automobile Engineers, who have published a list of approximately seventy standard specifications for various parts of motors. The use of these standards is, of course, voluntary but the majority of important firms work to them.

Some of the more important motor parts for which standards have been worked out are Brake Linings, Bumpers, Carburettor Flanges, Lamp Brackets, Sparking Plug Dimensions, Unions, Nipples and Nuts, Carbon Brushes for Magnetos, Distributor Mountings, Dynamos, Magneto Switches, Piston Rings Dimensions, Poppet Valve Heads and Valve Seat Inserts. Standards have also been published relating to such matters as the "Positions and Movements of Control pedals and levers," "Conditions of Tests for Petrol Engines," and "Factors in Vehicle Designs which have an adverse effect on tyre wear." But for the most part the standardization work so far accomplished has been slow and difficult and only a very small part of the field which might be covered has yet been touched. In America, for example, the Society of Automobile Engineers had by 1928 published over 600 specifications,

officially supported by the National Automobile Chamber of Commerce. In Germany the Deutsche Normenausschuss circulates standard specifications, of which by 1930 210 were in effect,¹ and the Association of German Motor Manufacturers has endowed an institute to collect the results of experiments in technical colleges and firms and, to avoid duplication of research, to circulate them to members of the Association. It is interesting to see that though the use of standards in Germany is voluntary, semi-official steps have been taken to enforce it. It was announced in 1933 that the Reichsbahn, Reichswehr, Reichspost and chief transport companies had decided to buy only motor vehicles built to the standard specifications and also that the issue of licences for motor vehicles is to depend on whether they conform to those standards²—an example of "Gleichschaltung" which has much to commend it.

Development of exports of British motor vehicles is not likely to affect substantially the seasonality of the industry. It has been shown that at present exports tend to be greatest at the beginning and end of the year. An increase in foreign trade may mitigate the severity of the secondary seasonal slump that comes in the New Year, but can hardly help the manufacturers to increase production during the slack summer season.

Granted that the motor and cycle industry must retain a considerable element of seasonality, are there any methods available by which the resulting unemployment might be reduced or alleviated?

Organized short time, as we have already discovered, is fairly common in the industry and seems the most

¹ R. A. Brady. *The Rationalisation Movement in German Industry*, p. 430.

² *Economist*, December 30th, 1933, p. 1283.

satisfactory method of spreading the available employment. Shorter hours for the whole staff every day of the week are probably less economical, since the costs of starting up machinery will obviously be increased in proportion to output. The industry in normal times contributes more to the Unemployment Insurance Fund than it takes out so it cannot be said that by organized short time other industries are being compelled to subsidize its unemployed.

There seems to be no possibility of dovetailing work in the motor and cycle industries with other employments on any large scale, chiefly because these industries are for the most part concentrated in certain areas where little similar work with a different seasonal curve is available.

In 1930 56% of the workers in the Motor Cycle and Aircraft trades were to be found in Warwickshire, Worcestershire, and Staffordshire, and in these counties the motor industry accounted for over 15% of the total number of employed persons. The seasonal influence of the motor industry, however, spreads to many trades which are partly dependent on it : for example, rubber, mechanical engineering and sections of the iron and steel industries. Those industries, too, are found to be largely concentrated in the same districts. The seasonal unemployment for which the motor and cycle industry is responsible leads therefore to heavy seasonal unemployment in certain areas which, being largely dependent on this industry, possess few alternative trades to which unemployed motor and cycle workers can turn in the slack seasons. Two towns particularly concerned are Coventry and Oxford. Coventry is a town of varied industries, it is true, but many of them work to a great extent for the motor and cycle trade

and fluctuate from month to month in sympathy with it. About half the insured population is in the motor and cycle trade itself or in industries working for that trade. In Oxford, on the other hand, Morris Motors and associated companies are the only industrial plants of importance and very little other work is available for those displaced. The seasonal curves of total employment in both Coventry and Oxford correspond to those found in the motor industry.¹ In Coventry, in the comparatively "normal" years 1927 and 1928 unemployment varied from just over 2% at the busiest time to about 12% in the slackest; about 10% of the insured population, or 7,000 persons, were seasonally unemployed in the course of the year for a longer or shorter period. These figures, indeed, minimize the real fluctuation for a very large number of workers come daily to Coventry from other towns and many of them, when unemployed, will sign the Register at their home town, not at Coventry.² In Oxford serious seasonal variations only began to develop from 1930. In spite of the high average unemployment a temporary and seasonal shortage of certain kinds of labour is not uncommon in motor districts. In Coventry, for example, in the spring of 1934 there was said to be a quite serious shortage of boys and youths and also of certain classes of skilled workers. The situation is comparable with, though less serious than, that in the clothing industries where, also, seasonal variations in employment are frequently associated with seasonal shortages of labour.

In these circumstances, it is hardly surprising that

¹ See the *Local Unemployment Index*.

² At a Census made in 1929 it was found that there were 27,000 persons coming daily to work in Coventry, mainly from Birmingham.

dovetailing of workers between the motor and other industries is rare. Indeed only two cases of extensive dovetailing were found. Machine wood workers are rare in Coventry and usually come in from Birmingham; many of them are employed in motors only during the season and work elsewhere (chiefly, it is believed, in the Birmingham railway coachbuilding shops¹) during the rest of the year. The other case of dovetailing relates to the small number of women employed in manual work in the motor and cycle industries. In Coventry one of the few trades not associated with motors and cycles is the manufacture of radio apparatus—a seasonal industry employing many women and with its seasonal peak from October to December.² Many women combine employment in this industry with employment in motors and cycles. Since, however, the seasons partly coincide, October to December being busy in both trades, a shortage of women workers is frequently felt in Coventry at the end of the year—a shortage intensified by the Christmas demand for extra female labour in retail shops. Partially successful efforts have been made by the Ministry of Labour to induce the wireless firms to advance their season of production and thus to enable a more satisfactory dovetailing to be organized.

¹ Railway coach building (see Appendix III) is slightly seasonal, the peak covering the four or five central months of the year.

² See Appendix III, Electric Cables etc. Industry.

CHAPTER V

THE CLOTHING INDUSTRIES

I. INTRODUCTION

ALL sections of the considerable group of clothing industries are subject to some degree of seasonal variation. The causes of seasonality are very similar in the several trades but, as we shall see, the problem works out in different ways in the different sections. The fundamental cause of seasonal fluctuation is the obvious natural or climatic factor: different kinds of clothes are required in summer from those worn in winter. It is natural, too, that new purchases should be made on the largest scale when the climatic seasons are changing, in spring and autumn. This, however, cannot be the sole explanation of seasonal variation in employment and production. If it were, manufacturers could quite simply avoid fluctuations in output by making winter clothes in the late summer and early winter, and summer clothes in the late winter and early summer. We have left out of account the very important market or conventional institution of fashion. Because fashions change so rapidly and because there is such a great variety of styles and designs for every garment worn, the manufacturer cannot as a rule foresee the demand for his products very far ahead and production must tread closely on the heels of demand.

The importance of fashion as a cause of seasonality of employment is accentuated by the organization of industry in most clothing trades. The large firm, by

producing a variety of goods and by forecasting demand and holding stocks whenever possible, can to some extent smooth out fluctuations. Most branches of the clothing trades, however, consist predominantly of small-scale producers and the small firm cannot so easily forecast demand, finance extensive stocks or take the other steps which might reduce irregularity; production in the small firm must be largely hand to mouth and follow closely the fluctuations in demand.¹

Two important influences affect seasonal fluctuation in all the clothing trades. The first of these is the great extension of the demand for fashionable clothes, an extension which is due not only to rising standards of life but also to the joint efforts of manufacturers and retailers and to outside factors such as the press and the cinema. In almost every kind of garment—certainly, in every kind of women's garment—styles have increased in variety and in the rate at which they change, while almost every class of customer insists on up-to-date designs. Fashion, as we have seen, is a very important element in seasonality indeed, and the spread of the fashion demand tends to increase seasonal irregularity.

The second great influence is technical progress, which on the whole probably tends to reduce instability. The development of machinery, making possible mass-production methods, has led to the partial supersession of the small workshop by the large-scale factory, and the large-scale factory, we have seen, can more easily smooth out fluctuations than the small firm. Moreover, technical progress, together with the development of

¹ Statistical corroboration of the generalization that employment is more irregular in the smaller firms in the clothing trades as a whole is available from the *Census of Production* 1930. See Note at end of chapter (p. 139).

Trade Boards imposing minimum wage standards, has led to the diminution of the sub-contracting and home-work section of the trade which suffers most severely from seasonal fluctuation. On the other hand, the reduction in costs due to technical improvements has itself contributed to the extension of fashion demand and thus to the intensifying of seasonal irregularity.

In spite of technical developments, however, the small scale firm is still predominant in most sections of the clothing trades, and the mass-production factory, whose workers are numbered in thousands, competes with the little workshop with its "team" of half a dozen. In many branches, indeed, the economies of mass production do not appear to be very significant. Thus in tailoring, dressmaking and millinery as many as one in four of the workers are in firms employing ten or fewer persons.¹

With these general observations in mind, we can go on to enquire in more detail into the seasonal problem as it presents itself in several branches of the clothing industries. This industrial group, however, covers a large variety of trades, not all of which can be studied in detail here. It is proposed to deal with three of the more important trades: tailoring, light clothing, and hats and caps. The amplitude and pattern of seasonal variation in each section, the nature of the seasonal problem and the reactions of the trade to that problem will be described. It will be found that one very important element in the problem is a recurrent seasonal shortage of certain kinds of labour and in Chapter VI we shall meet the general question of labour supply and organization, and see how it is linked up

¹ *Census of Production 1930* The omission from this Census of firms of ten or less is thus a serious deficiency in the case of the clothing trades.

with the seasonality of the trades. Lastly we shall enquire how far seasonal fluctuations might be further reduced.

2. TAILORING

The amplitude of seasonal fluctuations in tailoring is not only greater than in any other branch of the clothing trades but greater than in any other industry. On the average employment varies between 5% above and 5% below the moving average¹ while in spite of the effect of cyclical movements the amplitude and pattern of the seasonal swing remain very regular from year to year. The seasonal low point comes in January, after which the curve rises rapidly during the spring to the peak, generally in May. Much depends on the dates of Easter and Whitsuntide, festivals which mark the chief rush periods of the year,² and on the weather, which will often govern the time at which the season opens and closes. From May employment declines and is below the average every month after July. There are, however, two small but very regular secondary peaks, one in October (the autumn season) and one in December (for Christmas).

Total unemployment in tailoring averaged 11% for the years 1924-32; in spite of the expansion of the industry, the figure in no year fell below 6.9% (1927).³ How much of this unemployment was due to the seasonal character of the industry? Average seasonal

¹ See Appendix III.

² Whitsuntide is the busiest time of the year. The month showing the highest employment is May each year except 1926 (affected by the General Strike) and 1932. In 1932 April was the peak and Whitsunday was as early as May 8th. In 1924, when Whitsuntide was late (June 1st) May and June showed the same employment figure.

³ See Table I (p. 138).

unemployment in tailoring¹ amounted in 1924, 1928 and 1932 to 4·6%, 5·6% and 5·3%. These figures represent 49%, 71% and 73% respectively of total unemployment in those years. Thus in tailoring it seems that (apart from a year of general depression when the proportion fell) from half to two-thirds of total unemployment is accounted for by the seasonal fluctuation.

Tailoring is a large and expanding industry, employing in 1933 192,000 persons (of whom over two-thirds are females); this number shows an increase of 10·5% since 1923. For the purposes of this discussion the trade must be subdivided into three distinct branches: men's tailoring, women's tailoring, generally known as mantles and costumes, and waterproofs and raincoats.²

Men's tailoring covers the production of men's and boys' suits (including flannel trousers and sports coats) and overcoats, whether ready-made or bespoke. Mantles and costumes include women's tailored coats, costumes and overcoats, ready-made and bespoke. In both the men's and women's tailoring trades an important distinction must be drawn between the wholesale trade—which includes all the large factories and a great many small concerns making both ready-made and bespoke garments and dealing with the customers through the retailer—and the retail bespoke trade—in which the tailor supplies the garment (always bespoke) direct; retail bespoke tailoring is now only a small part of the trade and consists of very small concerns supplying almost entirely the high-class market. The waterproof section of the trade is in many respects

¹ See Appendix 2, p. 286.

² The difference between waterproofs and raincoats is that the former are 'banned', the latter are not.

unlike other branches of tailoring but raincoat manufacture is often carried on by firms engaged in general men's tailoring.

The principal centres of men's and women's tailoring are London, Leeds and Manchester, Leeds being the home of the great wholesale tailoring factories. Wholesale tailoring is also important in a number of small towns; we may instance, in the north, Nantwich, Wigan, Crewe and Hebden Bridge. The greater part of the waterproof trade is centred on Manchester.

Men's Tailoring. The seasonal patterns of demand for most of the different products of the tailoring trade are very similar. For suits, flannel trousers and sports coats the peak demand is in the spring. It reaches its height between the week or two before Easter and the Whitsuntide holiday; one firm declared that one-quarter of its annual sales came during those six or seven weeks. There are generally pronounced spurts in demand in the week before Easter, in the week before Whitsuntide and also just before the August Bank Holiday. For overcoats and dress suits, on the other hand, demand reaches its high point in the autumn. There is probably little difference in seasonality of demand between the ready-made and bespoke sections of the trade, though production in the former can be more easily stabilized than production in the latter. The high-class bespoke trade, wholesale and retail, is fairly regular, though slight expansions of demand are felt in April-May and in December. The demand for the cheaper bespoke suits, which constitute the bulk of the bespoke trade, on the other hand, fluctuates as much as the demand for ready-mades.

In the wholesale men's tailoring section production fluctuates very much less than the demand of the

market. Most firms are able to smoothe their output and their employment, to a greater or less extent, by a variety of methods. It is possible to take advantage of the different seasonal demands for different products, for example by making suits in the first part of the year and overcoats in the second ; nearly all firms of any size engage in more than one line of production. Secondly, while production of bespoke garments is necessarily hand to mouth, and delivery must be made within a few days of the order being received, ready-made suits and overcoats can be made to stock by any firm with a reasonably assured market. Style changes are important but spring fashions are determined the previous autumn. Thus the winter slackness in demand can be countered by making ready-made suits for sale in the spring, while in the summer, though it is dangerous to ignore the possibility of fashion changes and to make suits for stock, it is generally possible to start work on overcoats. Most large tailoring firms engage in both the ready-made and wholesale bespoke trades. The peak demand for both classes comes in the spring but the usual practice is to prepare so far as possible during the winter for the ready-made demand and to concentrate during the spring months on the bespoke work only. From before Easter till Whitsuntide many firms whose total annual output may be about equally divided between ready-mades and bespokes may be engaged entirely on bespokes. Both these methods of stabilization are more easily employed by the fairly large firm than by its smaller competitor. The former can more easily take on more than one class of production, can speculate on the future demand for its goods with more confidence, probably has a geographically wider market

and has more influence in the determination of future fashions than the latter.

Thirdly, firms of all sizes can vary their output within certain limits by altering hours of work without affecting the actual numbers employed. The upper limit of overtime is, of course, set by the Factory Acts, which restrict the weekly hours of women and young persons to sixty, but in practice overtime is likely to be limited before it reaches this point by the higher wages¹ (especially if more than two hours overtime are worked in a day) and also by the fact that the productivity of workers, particularly of women, is likely to fall after a certain number of hours. These factors generally come into play to limit overtime because the rush periods in which overtime is required are short though intense. It is very rare for a factory to work less than forty hours in a week ; this normally means closing on Saturdays but working a full day for the rest of the week. Thus by varying the hours worked production can fluctuate between say 25%–30% above, and 15%–20% below normal without any change in the numbers employed. Speeding up of workers can expand these margins only slightly ; the speed of the machine is set (at say 2,500 stitches per minute) and though there may be room for more rapid handling of the material before it is put under the needle, or for preventing delays due to shortage of material, the normal pace in a tailoring factory is very quick, the

¹ Extra overtime pay, by Trade Board regulations, is at the rate of +25% for the first two hours overtime on any day, +50% for the third and fourth hours, and +100% thereafter. The extra rate on Saturdays is +50% after the first five hours work and +100% after nine hours and on Sundays and holidays twice the normal level. The "normal number of hours," in excess of which overtime must be paid, is forty-eight in a week or nine hours on any day other than Saturday or a holiday. Overtime rates are slightly different for workers—chiefly in Jewish factories—who customarily attend only five days in the week.

work needs considerable concentration, and it is unlikely, especially if overtime is being worked, that hourly output can be much increased. In off-seasons the pace of the work is not much slowed down and employers will generally shorten hours, or reduce their staff, rather than countenance "slacking." There is, therefore, a seasonal variation in earnings which, approximately, on account of overtime pay, is of somewhat greater amplitude than the seasonal variation in hours worked.¹

A fourth method of securing stability in a single firm is to give work out at the rush seasons to sub-contractors, generally small firms who bear the burden of the seasonal fluctuations avoided by their principals. In London, particularly, a great many of the larger factories in this way reduce the irregularity of their own activity.

SEASON	CHIEF LINES OF PRODUCTION	
	Firm A	Firm B
August-September	Overcoats, sports coats	Overcoats
September to March	Ready-made suits	Ready-made suits, flannel trousers, sports coats, dinner jackets, overcoats
March (before Easter) to June (Whitsuntide)	Bespoke suits	Bespoke suits
June to August	Tweed trousers, overcoats, bespoke suits (fewer)	Bespoke suits
Steadily all year	Flannel trousers	Raincoats—also some bespoke suits

¹ See Table II (p. 135).

Many of the big firms in the tailoring trade, and an appreciable proportion of the moderate-sized ones, have succeeded by these methods in reducing seasonal fluctuations in employment to very small dimensions. The normal production time-table over a year is given on the previous page for two firms, both very large, which have been able almost to eliminate the necessity for dismissing workers in the slack season.

Both these firms are connected with extensive retail organizations and are assisted to obtain stable output by their associated retailers giving orders in good time and carrying fairly heavy stocks. Firms not directly associated with retailers cannot as a rule stabilize production to the same extent but the usual ordering and buying times enable production to go on some way ahead of demand. Thus orders for ready-made suits and flannel trousers to be delivered from March can generally be got by September; orders for winter overcoats, delivered from September, can be got in June. The chief obstacle to more effective stabilization is, however, the large volume of bespoke work which comes in the spring and it seems to be the general opinion that in view of the vast popularizing of cheap bespoke suits the demand for them is increasing faster than that for ready-mades. Continuance of the present tendency will, therefore, make it very much more difficult to avoid the seasonal fluctuations in demand by anticipating stock orders.

In the larger wholesale factories stabilization of production and employment has hitherto been comparatively easy. In the smaller wholesale tailoring firms conditions are different. The small and moderate-sized factories, employing from twenty-five workers, can indeed diversify their production, and can risk a

certain amount of manufacture for stock in slack times. But the smallest firms are in general entirely dependent on the orders they get from week to week. These firms may sell to a wholesaler, or they may be subcontractors or "makers-up" working either for a factory—which will put out the orders it cannot deal with itself, mainly in the busy season—or for a retail tailor. The retail bespoke tailor dealing direct with the public does not always do all his own work on the premises; a common practice is to measure the customer, to cut the cloth, and to send it out either to a wholesale factory as a "factory special" or to be made up by a subcontractor. These small firms, whether subcontractors or not, generally consist of from eight to twelve workers—though many subcontractors have up to fifty employees; they generally specialize on a particular garment—coats, vests or trousers.

It is on these firms that the burden of seasonal fluctuations falls most severely. The subcontractors, especially, must be able not only to cope with the fluctuations of demand from their normal market, but also to take off the factories some part of the peak demand with which the factories cannot deal. In such firms production fluctuates directly with demand for they are obliged to work on what is described as a "sell and make" basis. The only way of stabilizing production open to the smaller firms (and only to those who are not simply subcontractors) is to turn out and sell specially cheap suits during the slack season. This is occasionally done, especially by firms which have bought cloths (perhaps for making samples), which do not prove popular.

The activity of the retail bespoke tailors who cater exclusively for the high-class trade probably fluctuates

less than the average, for the demand is a good deal more stable. In this class of firm the number of workers probably varies little but the amount of work done and the wages earned will vary a good deal. In one firm of this class in Manchester it was found that the total wage bill was twice as high in the busiest week of the year (in May) as in the slackest (in January), the number of workers being unchanged. These high-class firms are, however, few, the largest number being situated in London.

The Mantle and Costume Trade. In the mantle and costume, or ladies' tailoring trade, conditions are rather different from those in men's tailoring, though the problems arising are not dissimilar. Indeed a few of the large and moderate-sized factories carry on both branches. There is the same division between the bespoke and ready-made sections, but in ladies' tailoring by far the greater part of the trade is now and has been for a long period in ready-made garments. Bespoke work is limited to a very small number of expensive shops. The number of large factories is, however, not great and the bulk of the work is carried on by small factories and small workshops. The latter work partly for retailers, partly for wholesalers and it is a common practice for the wholesale merchant to buy the cloth, and even to design the costume, and to contract with the manufacturer to make up a garment. This method of organization makes it possible for a tailor to collect a team of workers and to carry on business—often in his own house—with very little capital.

The mantle trade is a great deal more seasonal than men's tailoring. The busy season starts at the beginning of the spring and continues till June, with a secondary season in the autumn. To begin

with, the element of fashion plays a much greater part, and the variety of materials and designs is far wider. This makes it a matter of considerable difficulty and risk for even the large factory to make to stock. The styles, it is true, are settled some months ahead of deliveries—for the spring and summer, about Christmas, and for the winter, in the spring—but the most far-sighted manager cannot say which of a great range of styles is likely to prove popular. Fashion as a factor in seasonality is reinforced by the method of organization. The scale of operation is so small that in most cases hand-to-mouth production would be unavoidable in any circumstances. Some idea of the extent of seasonality may be got from the experience of a medium-sized mantle factory in Manchester doing a good-class trade. This firm employs a permanent staff of about thirty, including the clerical and administrative staff. Another twenty workers are employed for the greater part of the year and are regarded as "semi-permanent." For the busy seasons, in the spring and autumn, up to twenty-five additional workers are taken on. So in 1933 the average employment at this firm was about sixty, the maximum seventy-five and the minimum not much more than thirty.

In Leeds, where the large factory has a firmer hold than in London or Manchester, the mantle trade is said to be becoming less seasonal, though it is still much more irregular than men's tailoring. The larger firms have been able to diversify their range of products, notably by taking on the manufacture of raincoats, and are able, within limits, to carry stocks. One firm making children's clothing is able to combine school blazers, made from December to June, with tweed

clothing, made from July to December for winter wear. Many of the methods of stabilization which are adopted in men's tailoring are not, however, open to the mantle trade. Fashion and variety render the manufacture of stocks very precarious, in spite of the fact that the bulk of the trade is in ready-made garments, while the opportunities for adding other products, with different seasonal patterns, are more restricted. But the varying of hours of work and the giving out of work to subcontractors can be, and are, extensively adopted.

It is a very common practice in all clothing centres for firms reducing their staff in the slack season to dismiss first married women, many of whom have husbands in work and who are not completely dependent on their own earnings. In all districts a certain number of married women are employed, but not a sufficient number to bear the whole burden—even were that desirable—of seasonal unemployment. In Leeds, however, it is more common than elsewhere for married women to continue in employment in the clothing trades, very often until they reach the age of sixty-five. Indeed the best years of a woman's working life are said in Leeds to be from twenty-one to thirty-five. In Leeds married women do in fact bear a very large part of the brunt of seasonal slackness. In many firms indeed, in Leeds and to a lesser extent elsewhere, married women only come in to work in the busiest season and special arrangements are made for them such as shorter hours and opportunity to go home during the day to feed their children. The extent, then, of married women's employment in Leeds reduces the seriousness of seasonal unemployment there as compared with other areas.

Mobility of Labour in Men's and Women's Tailoring.

The principal method of insulating the individual factory from the disturbing element of seasonally fluctuating demand consists, as we have seen, in the production of a diversity of products. If the same staff of workers is to be employed with reasonable regularity, this method of organization clearly demands a certain amount of adaptability on the part of the workers. They must be able to turn their hands to more than one class of garment.

Between the main occupational groups in the tailoring trade—cutters, machinists, pressers—mobility is hardly possible. Cutting and pressing in the wholesale trade (except in the juvenile section), are mainly male occupations; machining of vests and trousers is almost always done by females, though men machinists are commonly employed on coats and overcoats. The concentration of bespoke work at a certain season of the year, even if the same number of ready-made suits is produced at all other times, is bound to lead to some seasonal unemployment among cutters. In the manufacture of bespoke suits every garment is cut individually, while in making ready-mades, dozens of layers of cloth can be cut simultaneously by the use of a band knife. Since in the wholesale trade the amount of work put in after the cutting is not very different for ready-mades and bespokes, it is clear that in making bespokes there must be a larger number of cutters in relation to the number of machinists and pressers than in the case of ready-mades. The cutting room may, it is true, work more overtime than the other departments; but this can in most cases only be a partial solution. Even the firm with the most stable output—if this is made up of both bespoke and ready-mades—must therefore take on a certain number of extra

cutters during the season when bespoke garments are most in demand.

As between ladies' and men's tailoring there is practically no interchange of workers. In the former not only are the materials more delicate but the workers must be able to deal with a much greater variety of designs than in men's tailoring. More important is the possibility of transferability of labour between the wholesale bespoke and ready-made sections. Here it seems that there is little difficulty; in most cases, indeed, the processes are practically the same. The only problem arises when there is a difference in quality between the two classes of garments. A method sometimes adopted in these circumstances is to have three groups of workers. One group will specialize on bespokes, one on ready-mades, while the third will be able to deal with both sections and will be shifted from one to the other according to the needs of the season.

Transfer of labour (mainly of machinists) between different garments is more difficult. The general practice nowadays is for workers to specialize not only on a single garment but very often on a single process in the making of that garment. The small firm itself normally specializes on one garment. The skilled machinist may be able to "make through" the whole garment or the greater part of it but she will often be assisted by a less experienced Plain Machinist who performs the simpler operations such as making up facings, linings and inside pockets and quilting and padding. The garments making up the ordinary suit bought from a retail bespoke tailor may be given out to two or three subcontractors who work on this subdivisional method. In the wholesale trade, where

much larger firms are to be found, there is far more specialization, and few workers will be familiar with more than one or two machines. The average machinist, working on piece rates, will generally find it most profitable to specialize on a single operation. In the larger factories subdivision goes a very long way indeed. For example, the manufacture of a pair of flannel trousers can be split up into twenty different processes, each requiring a special machine. In this case twenty-eight workers would handle the trousers, though some of them would be operating duplicate machines. In Montague Burton's, the suit is split up into about seventy pieces, and most workers will specialize on dealing with some piece or pair of pieces.

Even in the highly specialized factories, it is possible to transfer coat machinists to making up overcoats and dinner jackets, and this is commonly done in the summer and autumn. Vest and trouser machinists are less easily moved to other work. In some factories flannel trousers are made at the same time as overcoats; in others ready-made trousers and vests are begun in the autumn for the following spring though the corresponding coats are not made till later, when the overcoat season has passed. In other factories there is a certain amount of work on boys' flannel jackets and shorts in the late summer. This work is relatively simple and vest and trouser machinists can easily pick it up. Since, however, the work is unskilled it is sometimes difficult to persuade the machinists to do it.

In short, the position is that in the large men's tailoring factories where diversity of production reduces the seasonal fluctuations of output the adaptability of workers is sufficient to permit reasonable

regularity of work among coat machinists, though vest and trouser machinists are liable to seasonal unemployment. In the small firms workers are less accustomed to specialize, but their greater adaptability cannot as a rule be utilized because the firms themselves tend to specialize on a single garment of which the production is necessarily seasonal.

In the mantle and costume trade specialization has not gone so far, and since there is a great variety of styles and materials to deal with, the average worker is accustomed to do several kinds of jobs. Again, however, the adaptability of the worker does not help the stabilization of production for only the larger firms are able to smooth out the fluctuations in demand by making products with different seasonal patterns of demand.

It is clear that although adaptability of labour cannot of itself produce stabilization of employment, it is an indispensable condition of stabilization. It is evident, too, that stabilization would be more easily achieved, especially in the wholesale factory trade, were workers more adaptable than they actually are. The relative immobility of workers is also an important factor in another problem—itself not unconnected with seasonality. This other problem is the shortage of labour which is felt in busy seasons by most sections of the clothing industry in several towns. The whole problem is reviewed in more detail later on (in Chapter VI) ; at this point it suffices to say that greater adaptability on the part of the workers would materially assist in its solution.

The relative lack of mobility is largely a matter of training. If the training of juveniles is restricted to a few specialized operations, any considerable degree of

mobility between the workers on the different processes is impossible. After the period of learnership is passed, the worker on piece rates¹ is unlikely to be anxious to learn new processes because she will inevitably suffer a severe, if temporary, drop in earnings; the employer, too, will probably lose money on adult workers taking up unfamiliar work.

The principal element in learning most machining operations—in tailoring or any other branch of clothing—seems to be less the acquiring of the necessary skill to handle the machine than learning to work at a very high speed. The mere operation of the machine does not present any great difficulty and can often be learnt in a few days. The modern specialized sewing machine will perform extraordinarily complicated operations almost automatically, and all the worker has to learn is to set the machine and to pass the material under the needle evenly and accurately. To work both accurately and at the sustained rapid pace to which the clothing factory is accustomed, however, requires a considerable degree of skill and experience. Thus, in the short run at any rate, specialization in a few thoroughly well-known processes is more advantageous to both worker and employer than moderate proficiency in a variety of operations. The worker who has mastered one process will—so long as she is working—make the highest earnings and get the work done most quickly. It is not until the worker finds that her particular skill is temporarily not needed, or until the employer finds himself short of skilled operatives on a particular job,

¹ The majority of workers, male and female, in the clothing trades except earners and apprentices are paid piece-rates. The minimum amount per hour which any piece rate must yield to an "ordinary worker" is laid down in Trade Board regulations. Minimum time-rates for learners are also prescribed but there is nothing to prevent learners being put on to piece-rates.

that the disadvantages of specialization become apparent.

It is important then, in connection with the question of mobility, to enquire how much training is actually given in tailoring. The Trade Board regulations, to begin with, are concerned with training. In wholesale men's and women's tailoring the regulations prescribe that a learner is one who "is employed . . . in learning any branch or process of the trade by an employer who provides the learner with reasonable facilities for such learning" but no definition is attempted of "reasonable facilities." A principle adopted where practicable by the Trade Board inspectors in enforcing this clause is that the training given should be sufficient to give the learner a reasonable chance of finding work in another factory if dismissed. Sometimes the "training" is so specialized and inadequate that it would be useless in another factory.

In actual practice the training given in the wholesale trade varies a great deal from firm to firm. It is usual, in moderate and large-sized firms, to teach the learner about three fairly simple processes. After two or three years the learner will be taught a more highly skilled operation, according to her capacity, and may well specialize on that operation for the rest of her working life. In one of the largest wholesale factories, learners are generally taught three jobs (canvas making, sleeve fastening and canvas basting). In addition, some are taught sleeve making, lining making and pocketing, the amount taught depending on the learner's capacity and on what she will ultimately do. Very few firms of any size give anything like a complete training in the trade. In Manchester one wholesale tailoring firm (employing about 200 workers) was found which

gives an all-round training to its learners, teaching the machinists to make through a complete coat, vest or trousers, and employing a full-time teacher for the purpose. It is believed that this firm is one of the very few large ones in Manchester to train its workers so thoroughly.

In the retail bespoke trade, the Trade Board lays down much more definite provision in regard to training. It is provided that the learner must be taught at least three operations in making coats, vests or trousers or the "making through" of skirts. Since the retail bespoke tailor employs as a rule not many more than a dozen workers altogether, he is in practice almost compelled to teach at least the prescribed amount.

The Waterproof and Raincoat Trade. The making of waterproofs (rubberized garments), is included under the heading of tailoring but should really be regarded as a trade of its own,¹ associated on the one side with raincoats, which are a branch of tailoring proper, and on the other with the manufacture of all kinds of rubber goods. In actual practice, most of the chief waterproof producers make raincoats in addition—though a large number of wholesale tailors also make raincoats but not waterproofs—while many large waterproof manufacturers are at the same time producers of other rubber goods (e.g., rubber shoes). The proportion of waterproof production accounted for by firms principally engaged in making other rubber goods is, however, diminishing and waterproof production

¹ The fact that waterproof making is one of the few clothing trades (the others being wholesale shoe manufacturing, knitting and the making of under-clothing from knitted materials) outside the jurisdiction of any Trade Board is one indication of its difference from other branches.

is becoming more and more a specialised trade.¹

It is estimated that in Great Britain from 9,000 to 10,000 persons are employed in waterproof manufacture ; of these from 5,000 to 7,000 are in Manchester and Salford where the industry has been almost completely concentrated in the past, though in recent years there has been a tendency towards decentralization. Since the making of raincoats is so closely bound up with general tailoring it is not possible to discover the number of persons employed in it.

The manufacture of both waterproofs and raincoats is subject to seasonal influences, the degree of variation being greatest in the former ; in both, the bulk of sales comes in the spring and summer between about April and September, but there is a considerable autumn season in the heavier raincoats and in leather coats. Exports of waterproofs, chiefly to Northern Europe, help to even out sales to a certain extent, but recently the export trade has seriously diminished.

The fluctuations in demand can be met in some part by making stocks in the slack season from January to March. This practice is, however, limited to men's wear, which is fairly standardized ; styles in women's coats are too numerous and vary too much from year to year for the making of stocks to be safe. In the export trade, making for stock is comparatively easy, since it appears that in the principal markets in Northern Europe customers are much less individualistic in their

¹In the *Census of Production* 1924, less than half (£1,534,000 out of £3,200,000) of the output of rubber-proofed waterproofs was produced by firms whose business consisted wholly or mainly in the manufacture of clothing. The majority was produced by firms whose main business was the manufacture of rubber goods other than clothing. By 1930, however, the greater part of the output of rubber-proofed garments (£3,539,000 out of £4,260,000) was produced by firms principally engaged in the clothing trades.

tastes than in Great Britain and less variety of styles is required.

In both the export and the home market, and in the demand from both sexes, weather plays a very large part in determining the volume and seasonal pattern of sales. A rainless season like the early summer of 1934 means a very severe falling off in the demand for waterproofs, and manufacturers who speculated on a normal demand by making up heavy stocks in January and February had to unload them at very low prices. The English climate is thus likely to make manufacturers rather reluctant to anticipate sales.

The amount of work can be partly adjusted to fluctuations in demand by reduction of hours of work but seasonal unemployment is nevertheless severe. Transference of labour is possible within rather restricted limits between waterproofs and raincoats. Thus finishers, button-holers, and hand buttoners can be quite easily transferred, but in most firms it is very difficult to get machinists to move. Such transference helps to reduce seasonal unemployment during the autumn, when raincoat sales are fairly high. In this respect the trade resembles the rest of the tailoring trade; in the big firms, the work is highly specialized and subdivided and workers are only accustomed to a single process. In most big firms, training is given only in two or three processes and workers cannot take up other work without a serious drop in earnings (piece-rates being the general rule). One firm was found which gives an all-round training and in this factory transference between the waterproof and raincoat sections is quite easy. Even in this firm, however, the number of workers at the busiest time of the year is about double that in the slackest time. In the smaller firms, as in tailoring, the

workers perform more processes but seasonal fluctuations are more severe since production is necessarily hand-to-mouth.

3. THE LIGHT CLOTHING TRADES

It will be convenient to include under the blanket title of light clothing the two Ministry of Labour classifications—dressmaking and millinery ; shirts and underclothing—partly because conditions are not very different, partly because a great many firms overlap the official classification. Dressmaking covers the making of women's *non-tailored* mantles, costumes, gowns and frocks ; millinery include the making and trimming of women's hats. The making of shirts and underclothing includes as well the making of pyjamas, blouses, collars, overalls, ties and scarves, but excludes all knitted goods. This division does not correspond to actual practice, for it is very common for firms to make frocks, overalls, and underwear together, or shirts and overalls, or woven underwear, etc., and knitted goods. The total employed in the two groups in 1933 was 97,000 (of whom over 90% were females). There was a slight increase (of 3%) between 1923 and 1933 in the aggregate employment.¹ London and Manchester are the principal centres of the trades.

The seasonal variation in employment is similar in pattern in dressmaking and millinery and in shirts and underclothing. There is, however, a difference in amplitude for while dressmaking and millinery are moderately seasonal, shirts and underclothing only

¹ Dressmaking and Millinery declined in employment during 1923 to 1933, while shirts and underclothing increased. But since many firms overlap the classifications, to some extent all that has happened is a shift between different departments within the same firms.

show a slight variation.¹ In both trades, the highest point is in April or May; the summer is fairly slack but secondary revivals occur in the autumn. In the winter activity again slows down, Dressmaking and Millinery showing the most severe collapse. In both trades, there was an appreciable increase in amplitude of fluctuation in 1931 and 1932.

The total amount of unemployment in light clothing, though less than in tailoring, is nevertheless considerable. Unemployment over the whole period 1924-32 averaged 7% in dressmaking and millinery and 9% in shirts and underclothing.* Seasonal fluctuations account for quite a large proportion of the whole problem; average seasonal unemployment represented in 1924, 1928 and 1932 respectively 40%, 56% and 37% of total unemployment in dressmaking and millinery and 23%, 23% and 17% in shirts and underclothing.* Seasonal fluctuations are thus responsible for about half the total unemployment in dressmaking and millinery and for about a quarter of that in shirts and underclothing, except in a depression year when the proportion was lower in both trades.

The patterns of seasonal demand for the various products of these industries vary little. For dresses and frocks the spring is the best season, lasting till Whitsuntide; from Whitsuntide to July there is a moderate trade in summer dresses, but August is slack. For millinery, again, the best season is the spring and reaches its height about May. The late summer is the slackest time. The demand for overalls is fairly steady throughout the year, but there seems to be as a rule a certain falling off in January and February. In the

¹ See Appendix III.

² See Table I (p. 138).

³ See Appendix I, p. 286.

case of underwear, sales are good from about May till July but they slacken later in the summer. Some firms report slight autumn revival, but from November to January trade is poor. The winter trade in flannel and flannelette garments has diminished seriously and cotton, mercerised cotton and rayon tend to be worn all the year. The demand for shirts appears to vary less than that for underwear but there is a distinct peak in the spring (February to April) and a lesser one in the autumn (September to December). The increased use of rayon and other "sports shirts" leads to a demand for a rather different kind of shirt in the summer from that worn in the winter. There does not appear to be any regular seasonal pattern in the demand for pyjamas.

It will be noticed that the demand for nearly all these products tends to increase to its highest point in the spring; Easter and Whitsuntide are generally peak periods but on account of the weather Easter is less effective in stimulating demand when it falls early than when it comes late. In some cases there is a secondary peak of demand in the autumn. Both the late summer and the winter are generally slack.

One factor of some importance to the light clothing (especially underwear) trades is the Bargain Sale. When the shops hold their Sales in January and July not only are unsold stocks unloaded but also special orders are given for cheap lines at low prices. In a good many firms production and employment show sudden spurts at these times.

As in the tailoring trade, a great many firms in all branches of the industries considered here have succeeded in reducing or partly reducing the seasonal fluctuations due to the nature of demand. The

methods used are fundamentally similar, though their application and usefulness differ according to the products made. The first method is that of combining the production of goods with different seasonal patterns. This is only practicable to a very limited extent. For example, the production of overalls, where demand shows no marked seasonal swing, is often combined both with shirts and with light dresses and considerably assists stabilization. Firms making chiefly underclothing can often add such lines as handkerchiefs and pillowcases which can be made in the late summer and autumn. In dressmaking the combination of ready-made and bespoke business, which considerably assists stabilization in tailoring, cannot be used for this purpose to any extent. Dressmaking covers both ready-made and bespoke business, but the trade is divided rather sharply into two sections; the one is engaged on a large scale in factory production of ready-made garments, made on sub-divisional principles; the other consists mainly of little concerns, in which small groups of up to four workers do an entirely retail bespoke trade, often involving a good deal of handwork. The ready-made wholesale factories find it a great deal easier to stabilize their output and employment. Even in firms which give fairly regular employment, however, weekly earnings vary from one time of the year to another.

One of the leading Manchester producers of light clothing, employing about 250 workers, has been aiming as a matter of deliberate policy to stabilize over the year not only employment but also production, and therefore earnings. This aim has not been completely achieved but the firm hopes to reach more or less complete stability within a short time. The methods

adopted are, first, extending the variety of products and, second, the obtaining of orders earlier than is customary in the trade. This firm previously got its spring orders by February or later, and its production was consequently bunched into the spring months. It has now succeeded, however, in getting orders for deliveries up to August placed as early as the previous November. This policy has enabled the firm to work regularly all winter on spring and summer orders.

Manufacture for stock is very much less easy in the light clothing trade than in ready-made tailoring, for the variety of styles in most products is large and constantly changing. In overalls and shirts, it is true, there are standardized lines of production which can safely be made ahead of demand, though even in the case of shirts, the rapidly developing demand for a rather different type of hot weather shirt is an unstabilizing factor. Underclothing and dresses are very much more subject to changes of taste. The demand for the more old-fashioned flannel and flannelette garments is indeed pretty steady and the garments themselves standardized. But the market for them has now given way almost completely to the demand for underwear of more varied styles and colours and of lighter materials. Almost the whole market for dresses and frocks is subject to the play of fashion. New designs and colours appear so frequently, and taste changes so quickly, that in one large department store frocks not sold within about three weeks will in most cases be put on one side to await the sales and a scaling down of the price by perhaps 50%. The women's fashion papers and the cinema (with its own highly organized press) are the chief agencies for the stimulation of taste; nowadays a new style, originating in Paris, will reach the

working-class streets of Manchester within a very few weeks of its first appearance.¹ Even in light dresses, however, there remains a certain number of conservative and slowly changing lines, which a manufacturer can reasonably, though with a certain risk, make for stock. It is in millinery that fashion changes most rapidly; here, indeed, production is almost completely hand-to-mouth.

The growing demand for a variety of patterns, and for up-to-date styles, makes the manufacturer's problem a difficult one. Not only must he be prepared to meet sudden fluctuations but also individual orders tend to be too small to provide a long run on the machines. The workers, as a result, are rarely employed long enough on a single job to get up to maximum speed, and time is wasted on the setting of machines and the organization of the work. Consequently not only is it rendered difficult to stabilize employment by making ahead of demand, but costs are raised all round. It seems generally agreed that during the slump there has been a very definite tendency for orders to be smaller, for less stocks to be held, and therefore, for hand to mouth production to increase. This factor probably accounts in part for the increased seasonality shown in 1931 and 1932.

As in the case of tailoring, hours of work can be varied in order to counteract fluctuations in demand while the number employed is kept fairly regular.

¹ A manufacturer in London is principally engaged in producing exact copies of the dresses worn by the favourite movie stars and selling them with attached photographs of Sally Eilers, or whoever it may be, dressed in the same costume. This practice has been widespread in the U.S.A. for some time and women in the highest classes of society take pride in resembling their screen idols. In England, however, it is said that the dresses made on this style and priced at round about 30s. sell best.

The normal hours of work and the extra overtime rates are the same as those in tailoring. The employment of subcontractors, who can be used to take off a certain amount of the peak load, is less common in the light clothing trades than in tailoring, but there are a good many of them to be found—mostly working on a rather small scale—in the wholesale light clothing trade. Another method of stabilizing which one firm making overalls declared to be useful is the concentration of sales efforts on the slack seasons.

Again, as in tailoring, it was found that the largest firms were most regular and it is easy to see that the methods of stabilization described are more easily employed by the large than the small firm. A chart showing the number of workers employed weekly by a particular firm of moderate size (from fifty to a hundred workers) is appended.¹ It will be noticed that the number employed hardly ever remains exactly the same for two weeks running. It will be seen also that the peaks and troughs vary somewhat from year to year; this is due to the firm having added new lines to its output from time to time.

Mobility of Labour in Light Clothing. Stabilization of employment requires a good deal of adaptability on the part of workers. This is even more true in light clothing than in tailoring, for in the former trade, owing to the difficulties of making stocks, production of a variety of goods is a more essential part of any stabilization policy than in the latter. On account, however, of the large and changing range of styles and materials, workers in the light clothing trades are usually less specialized, and better able to pick up several jobs, than in the more conservative tailoring trade. There is

¹ See p. 144.

a certain amount of movement between the shirt trade and dresses and underclothing but not, apparently, a great deal. There can be little movement between the retail bespoke and factory sections of dressmaking because in the former a considerable knowledge of handwork is required, and because workers in the retail trade must generally be able to "make through" a whole garment—a gown, skirt or coat—while in the larger factories more specialization is usual.

Within the factory trade in light clothing it is fairly common for workers to move from one section to another, but conditions vary a great deal from firm to firm. In several factories, it is a frequent practice to change workers about from frocks or gowns to overalls, or from cotton to woollen goods. Many workers, on the other hand, are restricted to particular materials; for example, they can work in rayon and cotton, but not in silk. The majority of large and moderate-sized firms, it seems, make their workers specialize, and prefer a highly specialized to a "good all round" machinist. These firms will, if they can, only take on adult workers who are specialists in the particular kind of work required; the result is that the workers coming from these firms find it difficult to get work elsewhere. Thus, except when there is a shortage of labour, transference is not common between the specialized and non-specialized concerns. Employers sometimes complain that they find it extremely difficult, even within a single factory, to move workers as much as they would like from one section to another.

The whole question is, as we have already found in the discussion of tailoring, partly a matter of training, partly of wages. An employer taking on a worker who may be experienced, but who is not accustomed to his

methods, is likely to lose money on her for two or three weeks even if he pays her nothing more than her piece-rate earnings. The worker herself, of course, will suffer a severe drop in earnings. In actual fact a good many employers guarantee some minimum wage to workers in this situation. The guaranteed wage is generally the Trade Board rate—which is based on what an *ordinary worker* would earn and is likely to be above the piece earnings of a worker just starting on a new kind of job. One case was found of an employer guaranteeing to a worker moving to a new job her previous average earnings; but it appears that this is not a common practice.

The amount of training given by light clothing firms varies considerably. The Trade Board regulations as to learners are no more precise than in wholesale tailoring and apprenticeship, for boys or girls, is rare in all these trades. The only case of a minimum amount of training being required occurs in shirtmaking, where the Trade Union agreement for the Manchester district lays it down that out of the nine Sections or processes into which the making of a shirt may be divided at least four must be taught to every learner within two years.¹ In actual fact a good many shirtmaking firms teach a great deal more. One of the most highly sectionalized shirtmaking firms—and shirtmaking has become more sectionalized than any branch of the clothing trade except wholesale tailoring—claimed to teach its machinists every machining process involved in the factory's work. In this particular firm, in which the conveyor belt system has been adapted to shirtmaking,

¹ Agreement between Shirt and Collar Manufacturers' Federation (Manchester district) and Tailors and Garment Workers' Union (Manchester Branch), December, 1930.

it was found profitable to give an all-round training so that in case of emergencies, such as workers leaving, or falling ill, most workers would be able to take over any job required of them.

In other branches of light clothing some few firms give an all-round training and consequently find it much easier to regularize employment by producing a variety of goods. Some of these firms keep the learners together in the factory and employ an experienced worker as full-time teacher; some set each learner to work with an adult. Other employers will only teach a very few processes and will put the learner on piece-rates as soon as she shows reasonable proficiency in one. It is hardly surprising, in view of the extreme specialization and the consequent losses both to employer and worker which follow transfer from job to job, that most firms find it difficult to shift workers readily from one process to another.

4. THE HAT AND CAP TRADE

The seasonal variation in employment in the hat and cap trade is almost as considerable as that in tailoring. The busy season starts about February and there follows a rapid rise to the peak in May. After May comes a decline to July, a steady period to September, and a sudden collapse to the bottom of the curve, reached in November. Recovery then continues steadily into the busy period. Until 1928 the range of the seasonal variation was very regular. Since late 1928, however, there has been a very distinct tendency for the seasonal fluctuation to increase in intensity; the November slumps of 1930 and 1932 were unprecedentedly low.

The unemployment problem in the hat and cap trade is of moderate dimensions¹ and seasonal fluctuations appear to account for nearly half of it in normal times. Thus average seasonal unemployment amounted in 1924, 1928 and 1932 to 44%, 45% and 27% respectively of total unemployment. The hat and cap trade as a whole employed 32,000 persons in 1933 (63% being females) ; between 1923 and 1933 this number increased by only 1%.

We may subdivide the trade into four sections : felt hats, straw hats, caps and silk hats ; the conditions of the seasonal problem are somewhat different in each section.

The felt hat trade is the largest section. The old established centre of wool and fur felt hat making is the Stockport district. The industry here is highly concentrated, the greater part being carried on by a comparatively small number of large firms. The manner in which seasonal fluctuations in demand are met is determined largely by the exceptional power exercised for generations by the trade unions. The skilled workers, both men and women, are completely organized and are able to limit the number of new entrants to the trade.²

The extent of trade union control has undoubtedly

¹ See Table I, p. 138.

² The unions are the Amalgamated Society of Journeymen Felt Hatters (men) and the Amalgamated Society of Wool Formers and Trimmers (women). While the skilled workers' wage rates (mostly piece rates) are high, unskilled men and women are mostly unorganized and their wages relatively low. Entry to the trade is limited by the rule of one apprentice to every five journeymen. One chief reason for the strength of the union seems to be that technical progress, which often breaks the power of a craft union by substituting unskilled for skilled workers, has been fairly slow. The union has often been able to insist that when new machinery is introduced, its operation shall be in the hands of skilled men.

tended to lessen the effects of seasonal changes in the demand for hats. In the first place, the union has diminished seasonal unemployment by insisting that changes in the volume of output shall be met by altering hours of work rather than the numbers employed. At any rate until 1930 it was the general practice to reduce hours in the slack season by closing early every day. Thus the workers or most of them might be dismissed as early as two p.m. Since 1930, however, production has so far diminished that complete seasonal unemployment has become fairly common. At the same time, excessive overtime is prevented by the trade union agreement, in which overtime is limited to six hours a week, but cannot exceed two hours on any day.¹ The practice of reducing hours and the rule limiting overtime necessarily apply to unskilled as well as to skilled men. The restriction of entry to the trade also removes the possibility of a large reserve of labour, available for peak seasons but unemployed at other times, coming into existence.

Secondly, a peculiar practice of the trade mitigates seasonal unemployment when it does occur. It should be understood that in certain occupations the usual method of working is in gangs of say half a dozen skilled men. It is a very common practice for the wages to be paid by the firm to the gang or "pool" as a whole, according to their output. The money is then divided equally among the members.² Thus the organization of production is left largely to the pool, which considerably reinforces the independence of the workers. Very

¹ Threepence an hour extra must be paid to piece-workers for overtime. There is another rule to the effect that no overtime shall be worked in any section so long as there are union members out of work and available.

² Apprentices attached to the pool are paid a day wage by the firm.

frequently when work is slack, and temporary unemployment is necessary, the members of the gang will each take a week's unemployment in turn.¹ The member out of work, however, very commonly pays in his unemployment benefit to the pool and the wages earned by the pool, plus the benefit, is then divided into equal amounts, the out of work member receiving the same share as the rest. This practice clearly does not affect either the *total* amount of wages or the *total* amount of benefit paid out; it simply serves to equalize over a period of slack trade the incomes of the members of the pool.

An important factor reducing seasonal fluctuations in the Stockport district is the high proportion of exports²—chiefly to the British Empire, U.S.A. and Scandinavia. This proportion has, however, diminished seriously during the slump—resulting in increased fluctuations.

A change now proceeding in the geographical distribution of the felt hat trade may affect the way in which seasonal fluctuations in demand are met by internal organization. Just as Stockport is the traditional centre of the felt hat trade, so are Luton and the neighbouring parts of Bedfordshire the long established home of straw hat making. But the decline in the demand for straw hats seriously damaged the Luton trade and many firms there began to turn to felt hat production. Since straw hat manufacture was done largely by women, and often in the workers' own homes, there was no trade union tradition in the Luton district and the unions have not been able to get a secure

¹ In order to increase the earnings of the pool, the most efficient workers often do not take, by general consent, their turn of unemployment.

² In 1930 20% of wool felt and 14% of fur felt hats produced were exported.

foothold in the felt hat making concerns in that area.¹ Thus the methods of meeting seasonal fluctuations generally adopted in Stockport have not been introduced in Luton and further diversion of the trade from the north to Bedfordshire (without any growth of trade union strength in the latter) is likely to result in increased seasonal unemployment in the trade as a whole.

In Luton, however, there is a certain amount of dovetailing of workers between the several sections of the hat trade. Many factories are engaged in producing straw hats, felt hats and also ladies' hats of other fabrics. In some firms, the workers are taught processes in each of these lines and can fairly easily be shifted from one to the other, for straw hats can be made in the winter—the slack season in felts. But in view of the obstinate refusal of the public to restore the straw hat trade to its former dimensions, the possibilities of this dovetailing seem to be limited.

The cloth cap trade resembles tailoring or dress-making more closely than it resembles the manufacture of felt hats. The main processes are similar and the trade is carried on in London, Manchester, Salford and other general clothing centres. The main division is between uniform caps and civil caps; but the latter may also be subdivided into schoolboys' caps and ordinary men's caps.

The uniform cap trade is not noticeably seasonal but the demand for civil caps is slack in January and February, and busiest in the autumn. Firms generally

¹ Hitherto, the Luton firms have concentrated chiefly on the later processes in felt hat making and have bought the hat bodies or "hoods" from the north or from abroad. The trade union has, indeed, been partly responsible for hindering the development of the earlier processes in Luton, for union members are expected to coming south to teach their own trade in non-union firms.

specialize on uniform or civil caps and workers rarely transfer from the one to the other, the processes being rather different. For civil caps, which are made either from a single piece or from triangular "quarters" sewn together, special machinery is employed. In the uniform cap a piped edge is made, and the cap interlined with cardboard. Some firms combine school caps with men's caps and can to some extent concentrate production of the former (which depends on fairly large orders) into times when demand for the latter is slack. Only a certain proportion of workers can work on both types, however. Thus one firm visited (in the spring) was working almost entirely on school caps; it was said that not more than a quarter of the machinists then present could, if necessary, make men's caps.

The minimum Trade Board rates are those for the Hat, Cap and Millinery industry as a whole.

The manufacture of silk hats is moderately seasonal, with a long slack season extending from about August to February. The former importance of the trade has, however, vanished. Their regular wear is confined to a few of the more conservative and expensive public schools and to a very small proportion of professional and business men, ranging from cabinet ministers to bank officials and undertakers' men. For most of that rather larger number who wear silk hats irregularly, one hat will often last a lifetime of weddings and funerals. To-day there are said to be not more than 300 persons employed in London¹ and about 35-40 elsewhere. Of the latter there are about fifteen in Stockport and ten in Denton. The majority of the

¹ *New London Survey*, Vol. II, p. 325. This figure relates to 1930-31 and other authorities suggest that the number is considerably smaller now.

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workers are highly skilled and earnings are high. The trade is rather seasonal, with a long slack period extending from about August to February.

TABLE I.—TOTAL UNEMPLOYMENT IN CLOTHING TRADES

Average Monthly Unemployment as per cent. of Insured in :				
	Tailoring	Dressmaking and Millinery	Shirts and Underclothing	Hats and Caps
1924	9.4	8.0	7.1	10.1
1925	10.1	7.3	7.6	8.4
1927	6.9	4.7	4.4	5.2
1928	7.9	4.8	7.1	6.5
1929	8.2	4.9	5.5	7.2
1930	12.1	6.3	11.5	11.6
1931	15.2	9.1	14.4	15.9
1932	16.0	9.6	13.6	15.3
Average 1924-32	10.7	6.8	8.9	10.0

TABLE II.—SHORT TIME AND WEEKLY EARNINGS IN THE CLOTHING TRADES. (1924)¹

	Percentage of workpeople on short time in week ended :			
	19th Jan.	12th April	12th July	18th Oct.
Retail Bespoke Tailoring	37·0	12·2	15·8	28·0
Wholesale Tailoring	28·9	8·6	14·7	24·1
Dressmaking	20·1	5·1	6·0	8·7
Mantles and Costumes	18·1	9·0	8·3	15·2
Shirts, blouses, under-clothing, etc.	23·6	14·9	19·4	23·3
Millinery	4·6	1·3	4·1	6·4
Felt and Silk Hat Making	49·0	27·1	10·7	27·9
All Clothing ²	24·8	14·5	16·2	21·6

	Actual Earnings in week ended :				
	19th Jan.	12th April	12th July	18th Oct.	Average of 4 wks.
	s. d.	s. d.	s. d.	s. d.	s. d.
<i>Males—</i>					
Retail Bespoke Tailoring	49 2	60 7	57 6	55 9	55 0
Wholesale Tailoring	53 1	61 10	59 6	57 2	58 9
Dressmaking	50 4	52 11	52 3	53 6	52 3
Mantles and Costumes	63 2	68 5	64 8	67 3	65 11
Shirts, blouse, etc. making	53 5	54 1	54 3	53 6	53 10
Felt and silk hat making	52 3	58 2	62 11	57 10	57 11
All Clothing ²	52 7	56 5	55 9	54 6	54 10
<i>Females—</i>					
Retail Bespoke Tailoring	25 2	30 0	29 6	27 5	28 0
Wholesale Tailoring	24 10	28 5	27 1	25 11	26 7
Dressmaking	27 2	28 6	29 0	28 6	28 4
Mantles and Costumes	28 5	30 10	29 8	29 8	29 8
Shirt, blouse, etc. making	24 7	25 9	25 7	24 9	25 2
Millinery	28 7	28 7	27 11	26 11	28 0
Felt and silk hat making	23 9	27 6	25 9	25 7	25 8
All Clothing ²	26 6	28 2	27 9	27 0	27 5

(Source : Ministry of Labour Gazette, November 1926.)

¹ The 1924 Enquiry above covered more than one week in the year. Later

Note.—*Seasonal Variation in Large and Small Firms in the Clothing Trades.*

The existence of a close connection between amplitude of seasonal variation and size of firm is suggested by figures from the *Census of Production*. In 1924 figures were given showing the numbers employed monthly by all firms; in 1930 the *Census* was restricted to firms employing more than ten persons and figures of monthly employment in firms of over ten were given, for comparative purposes, in respect of 1924. It is therefore possible to calculate for 1924 the number of persons employed monthly (a) by firms of ten or less, (b) by firms of over ten. The comparison shows that the mean percentage deviation of the monthly figures from the average is nearly twice as great (3.7 as against 1.9) in firms of ten or less as in firms of over ten.

The figures for this calculation are only available for the clothing trades as a whole, which include Tailoring, Dressmaking, Millinery, Boots and Shoes, Hats and Caps, Gloves, and Umbrellas, etc.

enquiries on corresponding lines refer only to one week in October and are therefore no indication of seasonal fluctuations.

¹ Including some trades not given separately in Table. Among these other trades is laundry work.

CHAPTER VI

GENERAL PROBLEMS OF SEASONALITY IN THE CLOTHING INDUSTRIES

IN the previous chapter we have seen how seasonal fluctuations arise, the form which they take and the methods adopted to mitigate their effects, in some of the principal branches of the clothing industries. We propose next to review two general problems connected with seasonal fluctuation—problems which are not confined to any particular section of the clothing trades but common to several or all branches.

The first problem is that of labour supply in seasonal branches of the clothing trades. In many districts periodical shortages of labour are felt and appear to cause considerable inconvenience to the trades affected. Our object in studying the matter will be to see how far the shortage is connected with seasonal fluctuation and how the difficulties might be met.

The second problem is that of discovering by what means seasonal fluctuations in employment in the clothing trades might be reduced.

I. PROBLEMS OF LABOUR SUPPLY IN THE CLOTHING TRADES

Unemployment in slack times is not the only problem presented by the seasonal variations of the labour market in the clothing trades. The corollary, with equally serious results in many cases, is a shortage of labour in the busy season and there can be no doubt that in recent years, even during the slump, such

a shortage has regularly occurred in several clothing centres. This shortage is principally of women and girls; among them it is mainly a shortage of machinists, but is felt to a lesser extent also in the demand for finishers and pressers.¹ It takes the form both of a scarcity of experienced workers and of a shortage of learners, for complaints are made by employers both that they often cannot get the skilled workers they require for particular jobs and also that new recruits are not entering the trade in as great numbers as are required. Among males, the only scarcity seems to be of apprentices to the declining retail bespoke tailoring trade.² Before the war, too, shortages occurred from time to time but from all accounts the problem has recently become a perennial and not merely an occasional one.

In London, the shortage appears to affect all sections of the clothing industry; here, indeed, it is not confined to the busy seasons but is said to exist in certain districts all the year round. Naturally it is much more serious at the peak season. The shortage in Manchester, generally restricted to the busy season, is serious in light clothing (dresses, underclothing, shirtmaking, etc.) and, though to a less extent, in tailoring. In the Stockport hatting industry, no difficulty has been experienced and both employers and workers appear to regard the restriction of apprentices to one apprentice for each five journeymen as affording an adequate supply of fresh labour. In Leeds the shortage is said to occur quite regularly at the busy season and here, of course, it concerns mainly wholesale tailoring. The

¹ Pressers are generally men in tailoring and women in the shirt and light clothing trades.

² It is understood that not a single apprentice has been admitted to the retail bespoke tailoring trade for six years.

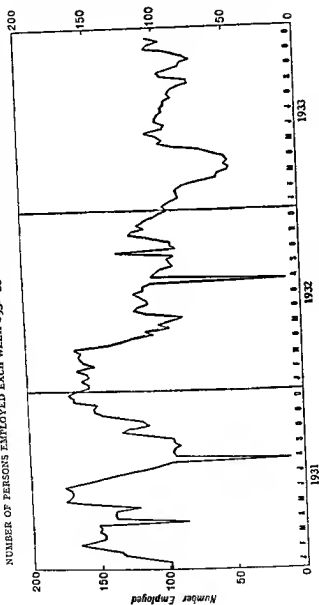
same kind of trouble is felt by the hosiery trade in Leicester during the season and also by hosiery firms in Manchester. In most of the smaller clothing centres there seems to be no difficulty. Views may differ as to the seriousness of this labour shortage but there can be no doubt that the matter is of sufficient importance for some effort to be made towards a solution.

In Manchester the shortage of workers is associated with, and is indeed partly responsible for, the very high labour turnover in clothing factories. Most firms have a nucleus of practically "permanent" workers, amounting perhaps to 50% of the total, who are employed quite regularly, even in the slack seasons. It is commonly asserted that the remaining workers, especially machinists, are constantly changing their place of employment, giving only the shortest notice or no notice at all. It is claimed by the employers that these changeable habits lead to an immense amount of trouble and disorganization, but it may be pointed out that the conditions of the trade can hardly be expected to have any other result. Granted an enormous number of small firms, each subject not only to seasonal but also to casual day-to-day or week-to-week fluctuations¹ according to the orders coming in, and differing widely in amenity and organization, it is only to be expected that workers reasonably alive to the insecurity of their jobs will come to the conclusion that the maximum of "mobility," as between firms, will offer the best prospects of a high average income on piece-rates. If a girl employed by Firm A hears that business will be a bit slacker next week but that Firm B across the road

¹ Note, for example, Chart 1 on p. 144, showing the number of workers, employed weekly by a reasonably representative firm. Besides the major seasonal fluctuations, the numbers employed show considerable changes from week to week, hardly remaining the same for any two consecutive weeks.

CHART I.

NUMBER OF PERSONS EMPLOYED EACH WEEK 1931-33 IN A MANCHESTER LIGHT CLOTHING FACTORY



has just got an order in that will mean additional staff for several weeks, she can hardly be blamed for transferring her allegiance from A to B. A highly developed, if unofficial, intelligence service exists and rumours as to the comparative prospects in individual firms—sometimes, no doubt, false or exaggerated, but generally reliable—pass round with remarkable rapidity.

Employers cannot be absolved from encouraging this tendency towards rapid turnover. Competition for labour, especially when there is a general shortage, is naturally severe and the majority of employers do their best to get what workers they can from other firms. Thus during the greater part of the year the Manchester evening papers carry a column or more of advertisements for machinists. Indeed one of the principal reasons why the clothing employers do not use the employment exchanges more extensively¹ is that while the applicants registered at the exchanges are almost all unemployed, by advertising there is a chance of attracting workers already employed elsewhere.

This competition takes the form principally of advertising, and girls are as a rule ready to move to a new firm simply because there is likely to be more work there for them. Only to a limited extent does competition take the form of offers of better wages. It is true that special bonuses are often paid (up to say 1s. in the £) in addition to piece-rates at the busy season : these, though often designed simply to increase the productivity of the workers already established, are easily alterable and can well lead to competitive offers in the hope of attracting additional labour. For the most part, however, it seems that a better chance of

¹ See below, p. 154.

earning more on the same piece-rates is a good enough reason for a worker to change her employer.

The reasons for the high labour turnover in the Manchester clothing trade may then be summed up as the instability of individual small firms. There is no doubt, however, that the high turnover itself adds to the instability, making the employer's task in organizing his production still more difficult. It may be observed, too, that while there is, to say the least of it, ample labour mobility as between firms, there is less mobility between occupations and processes than could be desired. The obstacles to increasing this latter form of movement have already been explained; possible methods of removing these obstacles must be suggested presently.

It seems that this high turnover of labour is a special feature of the Manchester clothing industry; in other centres it is much less marked. Thus in London the turnover rate is particularly high only among the small firms, especially among the subcontractors, entirely dependent on outside orders. In Leeds, and in the smaller clothing centres, mobility between firms does not appear to be great. In Leeds and other wholesale tailoring towns, where the average firm is, as we have seen, very much larger than in Manchester or London, casual fluctuations are likely to be less and as a rule workers are accustomed to stay with the same firm for longer periods.

A shortage of labour may be of two kinds, which can be briefly described as "qualitative" and "quantitative." It is believed that the shortage in the clothing trades is of both kinds. It is "qualitative" in the sense that while there are unfilled vacancies in certain occupations or firms, in other occupations or firms there

are at the same time workers unemployed who do not take the vacant jobs either because they are ignorant of their existence or because they are unwilling, or unable, owing to lack of training, to do the work required. The shortage is quantitative in the sense that even were the workers in the trade as adaptable and occupationally mobile as they practicably could be, there would still be a scarcity—though of course of lesser dimensions.

The extent to which the shortage is of both kinds can be put in this way: at moderately busy times of the year a scarcity in some occupations is found in conjunction with a surplus in others; that is to say, there is nearly always an appreciable number of unemployed workers who cannot be fitted into the vacant jobs. But at the busiest season, the number of unemployed diminishes to almost nothing. Workers are now induced to take unaccustomed work and employers, for lack of any alternative, are obliged to employ workers whom they would regard as unsuitable at any other time. Thus in the Manchester employment exchange on a particular day in April, 1934, there was not a single female machinist on the books available for employment and belonging to the occupations in which vacancies existed. Indeed there were very few machinists of any sort unemployed except for a few leather coat machinists who could do no other work. In many cases employers are obliged in such circumstances to take on workers on whom they are certain to lose money at first. In Leeds, examination of the Live Register on a day in May, 1934, the busiest time of the year, showed that there were fifty female tailoring workers out of work. About twenty of these were already placed in new jobs. Of the remainder, about

three-quarters were in effect quite unsuitable for any of the vacancies open; most were elderly women with experience of only unskilled occupations for which there was no demand and whom no employer would take on for other work even at that time. There were, in short, only about half a dozen workers really available for employment.

At the busiest time of year, therefore, it cannot be said that the shortage is a "qualitative" one; the position then is that there simply are not enough workers in the trade. At other times, however, there is no doubt that the shortage is really qualitative, and could at least be partially remedied were workers more easily transferable from one kind of work to another.

In order to arrive at any kind of solution of the problem presented, it will be necessary to separate these qualitative and quantitative aspects.

(a) The Qualitative Shortage.

We may first enquire whether there is any kind of maladjustment between the several *sections* of the clothing industry—tailoring, dressmaking, etc.—which leads to qualitative shortages remediable by more movement between these sections. The figures of changes in the numbers insured and employed in the several sections of the trade help to answer this question. Those figures show that while the numbers employed in tailoring and shirtmaking were expanding from 1923 to 1933 the number in dressmaking¹ then was diminishing, while the number employed in making hats and caps increased up to 1929, but diminished from 1929

¹ As already indicated (p. 123) shirtmaking and dressmaking are in practice often carried on by the same firm. Thus mobility of labour between them is in part merely movement from one department to another within the same factory.

to 1933. Examination of the corresponding changes in the numbers insured shows that in every case, both between 1923 and 1929 and between 1929 and 1933, the numbers insured moved very closely with the numbers employed.

There is no doubt, then, that between the several broadly defined sections of the clothing industry the degree of mobility appears to be sufficient to meet the changing conditions of the labour market. The movements in the indices are, however, due to two causes : both to workers already in employment moving from trade to trade and also to new entrants concentrating on the sections where their prospects are brightest and avoiding the sections where trade is falling away.

Training. An increase in the extent of mobility between occupations and processes, both between sections of the clothing trades and within each section, would appreciably assist both the removal of the labour shortage, in so far as it is qualitative, and also the reduction of seasonal unemployment. The obvious method of securing more adaptability is to increase the amount of training given. As we have found, workers in all sections of the trade, but especially in the factory trade, tend to specialize on one process as soon as they go on piece-rates and are not taught more than a very few processes while they are learners on time-rates. Of the few firms which do give an all-round training some declare that this practice pays them, others that it does not. In many cases, workers who have been thoroughly taught in a particular firm will stay with that firm and the employer will not be disturbed by the high labour turnover experienced by his competitors. This is especially true of firms which have peculiar methods of their own ; in such cases learners

might not find it easy to get work elsewhere. The variety of methods of production, ranging from complete mechanization to hand work, increases the immobility of labour.

Complaints are often made that a great many firms do not take their fair share of the burden of training ; such firms are alleged to take on as few learners as possible and rely for the rest on attracting the trainees of other employers. The Trade Board rates for learners seem to be based on the principle that an employer may expect to lose money for the first few months or so on a learner if she is to be adequately trained, but that he will recoup himself later. Thus the Trade Board rates for the later years of learnership are probably somewhat less than the worker would earn were she on piece-rates. This principle makes it easy for a less scrupulous employer to offer a learner of say fifteen or sixteen, already trained in another firm, a job on piece-rates. The girl will probably earn rather more by moving, but her first employer will have borne the loss involved in training her while the second employer makes the profit.¹ In other cases, however, learners on time-rates themselves take the initiative by moving to a new employer who will pay them piece-rates at once, without giving their original employer the chance to offer them piece-rates.

The prevalence of this practice has led many employers to put their learners on piece-rates as early as possible and to teach them just enough to enable them to specialize on a single job. The giving of an all-round training has in many—though not all—cases

¹ The manager of one firm visited complained bitterly of the shortage of machinists but was not himself employing any juvenile learners at all—not, he said, because of the difficulty of getting them but because of the expense of training.

very discouraging results. A few firms get their learners to sign a promise to stay for perhaps two years, but complain that the promise is very frequently broken.

It has frequently been proposed that the giving of a thorough training should be enforced by the Trade Board. At present only the Retail Bespoke Tailoring and Boot and Shoe Repairing Boards make any attempt to define the number of processes which a learner must be taught. (See p. 119.) The Tailors and Garment Workers' Union declare that they have made many efforts to get similar regulations for wholesale tailoring : for example, a rule that the learner should be taught at least three jobs on coatmaking, or the making through of a vest or trousers. These efforts have been unsuccessful. In the shirt trade, the trade union agreement (but not the Trade Board) already insists (see p. 131) that four out of nine processes must be learnt. Such regulations are practicable in retail bespoke tailoring and in shirtmaking, where the processes and garments made are fairly standardized and the variety limited. In light clothing, however, the number of processes is much greater and differs substantially from firm to firm ; it would be extraordinarily difficult to formulate any kind of regulation and much more difficult to enforce it. Wholesale tailoring, on the other hand, offers a more hopeful prospect for some kind of regulation ; the processes are fairly well standardized and the variety not too great. If any such regulation could be formulated and enforced it would certainly assist the solution of some of the labour problems of the trade.

At present there is very little provision for training clothing workers outside the industry itself. There are

two-year courses for girls of four or five years of age elsewhere. The Trade Schools and Junior Technical Schools, ranging from commercial training is mainly in handiwork and increases the recruits only for the highest class of trade. In Manchester there are evening classes in tailoring for boys and many firms girls but, again, the training is principally in the training; branches of the trade where a good deal of handwork as is required. The only other schools outside the trade seem to be those organized by the Sewing Machine Companies. Thus Singer's have about twenty-six machines in their Manchester branch establishment and teach girls free, giving up to a week's training. Girls may be discouraged from attending this kind of course, however, by the fact that while training they are not only not earning but are also ineligible for unemployment benefit.¹

Suggestions have frequently been made by employers to the effect that the State, or Local Authorities, ought to take a share in the responsibility of training recruits for the clothing trades. It has been proposed in Manchester, for example, that courses in machining ought to be available for the older girls in elementary schools. Since at the present time Education Authorities still find it difficult to provide that minimum of "realistic studies" which under the school re-organization proposals is to be given to all Senior students, it is hardly to be expected that the request for still more practical instruction should meet with a very sympathetic reaction. Indeed the period of school life is at present so short that it would hardly be practicable to graft on to it any sort of adequate industrial training.

¹ In general, workers, who are being trained with definite jobs in view (as are most of those who attend the Singer's branch) are not regarded as eligible for benefit because they are not available for work.

very discouraging the seasonal nature of employment learners to sign a pro the conditions of work in certain but complain that, it would hardly be reasonable to broken. late to undertake a responsibility for

It has recruits which it does not undertake for any thorough industry.

Board should, however, be possible to provide more in any way of evening classes for girls in the clothing trades, but such classes might not be successful unless employers co-operated by giving their workers some financial inducement to attend them.

The Use of Employment Exchanges. In so far as the qualitative shortage of labour is due not to lack of training but simply to unemployed workers not being put in touch with jobs which they could perform, it is clear that what is required is more complete organization of the labour market. The linking up of the supply of labour with the demand is the function of the employment exchanges and juvenile employment offices. The extent to which employers make use of the employment exchanges (which, for the purpose of this discussion, we may take to include juvenile employment bureaux) in getting their supply of labour for the clothing trades varies a good deal from place to place and seems to depend on the organization of the trade. Thus in Leeds where the tailoring trade consists mainly of a few large firms, and where workers are accustomed to work year after year for the same firm, the employment exchanges do the greater part of the filling of vacancies. A great number of the placings in Leeds, however, consist in recalling workers temporarily suspended on behalf of their customary employers and not in finding new jobs for the wholly unemployed. In Manchester and in London, where firms are smaller

and the turnover of labour seems to be greater than in Leeds, employers appear to use the machinery of the exchanges somewhat less, and rely very largely on advertising to fill those vacancies which are not filled by spontaneous movements of workers.

Some employers complain that the exchanges send the wrong class of worker, either inefficient workers or those who are not suitable for the vacant jobs. But employers are by no means unanimous in this unfavourable view of the exchanges and most of those who use the exchanges find their work perfectly satisfactory. It seems that a much more fundamental explanation of the reluctance of employers to use the exchanges is to be found in the fact that the latter can as a rule only supply unemployed workers and there is a risk of unemployed workers proving less efficient. By advertising, on the other hand, employers can draw on labour already employed elsewhere. It is to be expected, therefore, that the exchanges will be used least where the labour turnover is highest. Thus the failure of employers to make more use of the exchanges is closely connected with the high turnover of labour, and that we have seen to be due largely to the seasonal irregularities and general instability of the Manchester trade. In the hatting trade in Stockport and district the greater part of the placing work is done by the trade unions and the exchanges are used mainly to recall the temporarily suspended, for the workers rarely change their employer.¹ In most sections of the clothing trades there is no doubt that the exchanges, if called

¹ In general, more frequently, could provide a much more benefit because most of those

called worker is permanently dismissed he is given an "asking" card. This card gives him a customary right to a spell of "hop" in the country.

complete and efficient mechanism for moving *unemployed* labour into jobs than at present exists.

It is of some importance to remember that a very large proportion of seasonally unemployed workers are not "wholly unemployed" but "temporarily stopped." The temporarily stopped are workers who, while unemployed at the moment, have a definite prospect of returning to their former employers within a limited period (about six weeks is the general rule). This class includes all workers on systematic short time, who alternate three days or a week's work with a similar period of "play." Now although there is nothing to prevent the exchange manager from sending a temporarily stopped worker to apply for a vacancy, yet if there is no marked difference in suitability he will be put in the likely to send a wholly unemployed worker. It is provided that there is a fairly considerable surplus of labour, the employer, in temporarily suspending a worker, does not run a very serious risk of that worker being offered employment elsewhere. This means that, with certain qualifications, the pool of temporarily stopped workers is divided up into a number of labour reserves maintained by the unemployment insurance system but still loosely attached each to one employer.

(b) The Quantitative Shortage.

The Relative attractiveness of the Clothing Trades.
It may be enquired why, in view of the shortage in the clothing industry, more juveniles do not enter it and why more adults, unemployed in other trades, do not transfer to it. As for the first point, it cannot be said that a reasonable proportion of juveniles are not entering the trade. In Manchester approximately 25% of the females employed are to be found in the

clothing trades. The proportion of juveniles entering the trade varies from year to year but of all placings of girls by the *Juvenile Employment Bureaux*, 24% in 1931-32 and 28% in 1932-33 entered the clothing trades. Since a larger proportion of children find work in the clothing trades by answering advertisements or by personal application than in other industries, these figures must be considerably below the proportions of all children entering the clothing trades. On the other hand, the figures quoted include a certain number of "re-placings" of children already employed. In view of the high turnover in clothing, the proportion of such "replacings" may well be larger than in other trades. It seems unlikely, however, that the influence of this factor is very considerable.

Comparison of the wage-rates paid to juveniles on beginning work shows that the starting wages tend to be rather low compared with other important occupations. 6s. to 7s. is the usual Trade Board rate for the first year, though some firms pay 1s. or 2s. more than this.¹ In retail shops the usual starting wage is about 10s. or 11s.², in offices 8s. to 10s. Some Trade Boards prescribe higher starting rates than the clothing Boards. The Laundry Board, for example, prescribes 10s., the Fur Trade Board 13s., while the Post Office pays 9s. to a girl probationer.

Not only the immediate starting wage, but also, if to a lesser extent, the earnings paid to experienced workers influence juveniles in deciding on a trade. Here it is certainly the case that the clothing trades appear

¹ The actual starting rate sometimes tends to vary at different times of the year. Thus at the end of a school term it may in some firms be about the Trade Board rate, while it will rise in the middle of term, when juveniles are a great deal more scarce.

² Rate paid by Co-operative Societies.

relatively attractive, if full-time earnings are taken into account. The Trade Board rates vary from 28s. to 32s. but the actual earnings of machinists in a full week probably average 35s. in wholesale tailoring and in shirts and underclothes making, and slightly less in dressmaking and millinery. With overtime, £3 and £4 may be earned by the quickest workers in exceptional weeks. The other principal fields of women's employment in areas where the clothing trades are important are clerical work and work in retail shops. The only information available as to the earnings of clerical workers is contained in the *Merseyside Social Survey*.¹ The information relates only to one area, but one in which clerical work is of great importance, and the figures may reasonably be used to give some idea of corresponding conditions elsewhere (except perhaps in London). According to this *Survey*, average earnings of female clerks from twenty to twenty-four years old are 29s. The average earnings of adult female shop assistants were investigated by the Ministry of Labour in 1924-25 in the Drapery, Meat and Grocery trades.² Earnings averaged between 30s. and 35s. being substantially higher in London than elsewhere; they may well have fallen since the time of enquiry. If there were full-time employment all the year round, therefore, earnings in the clothing trades could be regarded as good. In fact, however, the average weekly earnings over the year will be appreciably less than the full-time earnings quoted. In the first place some workers suffer unemployment and thus complete loss of earnings for a certain number of weeks in the

¹ *Merseyside Social Survey*, Vol. II, p. 331.

² Ministry of Labour *Reports on Drapery, Grocery and Meat Distribution Trades*, 1926.

year. In the second place, there appears to be a distinct variation in the weekly earnings of those who are in work owing to differences in the length of the working week at different seasons.¹

The seasonality and general irregularity of employment must, of course, militate against recruitment to the clothing trades; moreover the conditions of work prevalent in certain sections of the trade may prejudice possible entrants and their parents against the industry as a whole. There is often said to be, too, a social prejudice against machining; it is thought that only a poor class of girl will take up this occupation. The extent of this prejudice, however, seems to be exaggerated and there is little doubt that it is disappearing. Some evidence that unwillingness of juveniles to enter the trade is not of the first importance comes from the Manchester Juvenile Employment Bureau.² Girls are normally asked what occupation they want to take up. Many, it seems, make no definite reply but of those that answer nearly half express a preference for the needle trades—a much larger proportion than actually find work there.

It seems, in short, that the clothing trades are already receiving an influx of fresh labour quite as great as could be expected if the wages and conditions are taken into account. The supply of entrants can hardly be increased unless starting wages are raised or the less regularity of work, and other disadvantages of these influences, are modified.

certainly some extent the same reasons account for the

¹ The actual of any appreciable transfer of adult labour year. Thus at clothing trades. The wages factor here is of Trade Board rate, a

great deal more scarce 139.

² Rate paid by Co-operative Employment Bureau. *Annual Report, 1930-31.*

considerable importance. The adult entrant will normally receive a juvenile wage when she first starts. The Trade Board rates for learners are in most cases based on experience only, regardless of age, but special provision is made for late entrants by the Hat, Cap and Millinery, Shirtmaking and Wholesale Tailoring Boards. An entrant of over eighteen is regarded as having been employed for one year. That is to say, she starts work at the same rate as a juvenile learner in her second year—in Wholesale Tailoring, for example, at 12s. instead of 7s. In the Wholesale Mantle trade the period of learnership for late entrants only lasts for a year, after which period the worker will generally be put on piece-rates.¹ Although the drop in earnings is still severe for the worker transferring,² the provision for adult learners has recently been used to an increasing extent. Thus in Leeds, during the first five months of 1934, over 200 adult learners had entered the tailoring trade. It appears, however, that very frequently the minimum wage of 12s. was made up by the employer to, say, £1. In Leeds, these workers were attracted to the clothing trades by the shortage; some came from other industries, while others had not previously been gainfully employed. It was said that most of the adult learners were put on piece-rates, and

¹ Some Trade Boards (Retail Bespoke Tailoring, Wholesale Tailoring, Mantles, Dressmaking) have a regulation to the effect that employment in a related trade (e.g. Retail Tailoring in the case of the Wholesale Tailoring Board) is to count for the purpose of the minimum rate. Thus for a worker who, after two years in Wholesale Tailoring, moves to Retail Tailoring, the minimum wage will be that which would apply to a worker who has been employed for two years in Retail Tailoring. This considerably facilitates transference between related trades.

² Indeed from the point of view of immediate income, the worker transferring would be no better off than if she were out of work, 12s. being less than the unemployment benefit rate for a woman of twenty-one and little more than, or the same as, the benefit rate for a woman of eighteen to twenty-one.

earned reasonable amounts, after a few weeks. It is not likely, however, that any great number of adult women, previously occupied in other kinds of work will ever be attracted to the clothing trades. The speed and nimbleness of finger needed by the power machinist are not easily acquired after a certain age. In those sections of the trade where work is highly subdivided, a slow worker may retard the whole system of production and will not be welcome. Moreover adult women naturally dislike learning a new occupation alongside young girls who will probably pick up the work and earn good wages a great deal more quickly than their elders.

One potential reserve of additional labour, often of highly skilled and experienced labour, is to be found among married women who have left the trade. As already described, this reserve is used quite extensively at present to support seasonal fluctuations. Special terms are offered in the form of shorter hours and opportunities for home duties and most firms have a list of married women who can be called on if necessary. It seems, though, that the limits of this reserve are, at existing rates of pay, very quickly reached. The demand of married women for wages tends to be inelastic and it is unlikely that even substantial monetary or other inducements would call many more from the fireside to the bench. Partly, too, the willingness of married women to earn will depend on whether their husbands are employed; and most of the towns (London, Manchester, Leeds), in which the shortage of female labour is severe are towns in which unemployment among men has been generally below the average.

To a very slight extent more male labour might be brought into the clothing trades. A good many firms

already employ men as machinists but only, as a rule, where the higher wages that must be paid are justified by the special skill required.

The Location of the Clothing Industry. One of the contributory causes of the labour shortage is the movement of workers out of those central and frequently congested areas in which the clothing trade is often found to suburbs and housing estates. In their new residences the factor of transport cost often makes it unprofitable or even impossible for workers who might have entered the clothing trades to work at a great distance from their homes. Even the distance of a twopenny tram ride means 2s. a week and 2s. is a large slice of a learner's wage. This factor is important in the East End of London and also in central Manchester, both districts in which the clothing trade flourishes and both districts which have seen in recent years a considerable exodus of residents.

If, then, workers are not available where the clothing factories are settled, would it be practicable for the clothing factories (which were established in their present situations largely in order to be near to the labour supply) to follow the workers to their new homes? To some extent this is already happening. In London, there is evidence of a movement of clothing factories away from the East End, where the labour shortage is most severe, to the suburban districts. In Manchester new clothing factories are being built on the outskirts of the city instead of in its centre, and, in a few cases, already established firms have moved out. An obstacle to this kind of decentralization is the urgency with which orders must occasionally be filled. The difference in time of transport may, it is sometimes held, be the difference between getting or not getting an

order, especially since to an increasing extent trade is direct between retailer and manufacturer, and no wholesaler will hold stocks ready in his warehouse. It is unlikely, however, that orders of such urgency that an hour or less makes all the difference are very frequent. Moreover, if a greater proportion of the trade were decentralized retailers would become accustomed to exercise rather more foresight when laying in their stocks.

The attraction of factories to the new local authority housing estates is important and desirable for many reasons. Present town-planning policy, with its wide decentralization of working-class housing, requires that industry too should be decentralized. But at present the town planner can do little more than block in with purple ink a certain part of his map, labelling it "Proposed Industrial Zone." All the local authority may do (and this requires special powers) is to offer inducements to firms, such as loans at exceptionally low interest, for the building of a factory on a housing estate. This has, indeed, been done by Manchester in the case of half a dozen firms, including one hosiery factory, at Wythenshawe. But clearly this kind of inducement, if offered on a sufficiently extensive scale to be at all effective, will be extremely expensive to the local authority and is moreover liable to lead to competitive "bidding" for industries between several local authorities. It is, too, a form of concealed subsidy which cannot be regarded with wholehearted approval.

The relation of location of industry to the problem of labour shortage goes farther than the question of decentralization within urban areas. In Manchester there is not at certain seasons enough suitable female

labour ; but within a couple of hours' journey by road are a score of cotton towns with a large surplus female labour force. The women in the cotton towns are accustomed to factory work and the earnings of most of them during the last few years are well below earnings in the clothing trades. Yet there has been almost no development of the clothing industry in the cotton areas and the number of new clothing firms established in recent years in Lancashire outside the existing clothing centres is very small indeed.¹

The principal obstacle to the development of clothing manufacture in the depressed parts of Lancashire is the distance from the market. In a seasonal fashion trade it seems that under present conditions this distance is thought to present formidable problems—more serious, clearly, than in the case of decentralization within a big city—on account both of the cost and of the delay of transport. It is difficult to believe, however, that the time taken to carry the finished products with modern transport facilities can really be of the first importance. A more serious objection involved in distance is that firms at the centre are more accessible to buyers than those at a distance, and proximity to the buyers may be of great importance in a highly competitive trade. In any event those sections of the clothing trades which are less competitive, in which fashion changes are less important, and of which the products, being fairly standardized, can easily be stocked, such as wholesale tailoring and shirtmaking, might well be established in the cotton

¹ The extension of the clothing trades to new areas would only be a solution of the "quantitative" labour shortage. So far as the "qualitative" shortage is concerned, it would appear that least difficulty will arise where the trade is highly concentrated since there will then be fewest geographical obstacles to movement of labour between firms.

towns. Both wholesale tailoring and shirtmaking are already found on quite a large scale in such towns as Crewe and Wigan—both fairly remote from the chief distribution centres. Again, however, it must be pointed out that no sort of machinery at present exists to initiate such a development.

To end this section, the close connection between the labour shortage and the seasonal fluctuations in the clothing trades may again be emphasized. The shortage, to begin with, is for the most part a seasonal shortage, and exists alongside average unemployment rates of from 8% to 14% in the several sections of the industry. Any progress in the direction of smoothing the seasonal fluctuations would therefore help to dispose of the shortage, both by allowing more complete use to be made of the labour already available and also by rendering the trade more attractive to new entrants. Such an increase in stability would help, too, to remove the disorganization resulting from the high labour turnover in the Manchester trade. The extension of adequate training and, more important still, the better organization of the labour market would at the same time reduce the shortage of labour and the seasonal unemployment.

It should be pointed out that to a limited extent the problems are already being solved by the methods indicated. Already the shortage of labour has stimulated a few firms to reduce seasonal instability in order to keep their workers together and to increase the adaptability of the workers already available by providing more complete training than is customary. Spontaneous movement in the directions indicated has therefore taken place, but so far only very slowly.

2. METHODS OF STABILIZATION IN THE CLOTHING INDUSTRIES

There are several reasons why efforts should be made—and in very many cases are being made—to smooth out the seasonal fluctuations in operation of the clothing industries. Employers, workers and consumers would all benefit from a greater degree of stabilization. The uncertainty and irregularity of work are harmful to the workers, reducing their standard of life and rendering their position precarious. The occasional shortages of labour, and the disorganization and high turnover rate which result, could be diminished by more stability. Lastly, more even and complete utilization of plant would result in lower overhead costs and should make possible some reduction in prices. The importance of this item can be gauged by consideration of the relative proportion of overhead costs in clothing. Material costs should be excluded from any estimate, because they vary greatly from one section of the trade to another. Deduction of wages paid¹ from the net output, as given by the *Census of Production*, should therefore give a rough estimate of the proportion of overhead costs. Thus in Tailoring, Dressmaking, Millinery, etc., wages are 50% of net output, in Hats and Caps 56% and in other clothing trades about 48%. In the clothing trades generally, then, it will probably be safe to say that overhead costs are from 40% to 50%. It appears that there are not wide differences between tailoring, light clothing, shirtmaking, etc.; figures are not available for the several sections but a reliable

¹ Salaries are not included as wages. Salaries should of course be regarded as overheads and so really should a certain proportion of wages (i.e. "Standing Wages"). On the other hand there are certain prime costs such as packing and transport which are included with overheads in this estimate.

authority estimated independently that in light clothing overheads varied from 40%–50% of total costs (excluding materials and dividends, but including depreciation and interest on loans and capital). These estimates are necessarily rough but suffice to show that any factor which reduces overhead costs per unit of output should make an important difference to total costs of production per unit.

We may sum up now the various methods which can be used to even out seasonal fluctuations. Most of these methods are already employed to a certain extent but in nearly all cases the possibilities of their extension go far beyond existing practice.

(a) Smoothing Consumption.

First of all, an attack may be made at the consumers' end of the market. The root causes of seasonal variation in demand we have seen to be climatic changes and fashions. Nothing short of compulsory standardization of the clothes of men and women—which to say the least of it is unlikely in individualist England—can make any very great difference to these factors. But it would probably be possible to modify consumers' ideas and habits in such a way as to make it rather easier than at present to forecast and anticipate demand. Thus the consumer's—principally the male consumer's—preference for bespoke over ready-made clothes might be modified. Ready-made garments, as we have seen, can be made to stock and any increase in the proportion of those sold helps to even out the seasonal curve of production.

While demand for a number of commodities is inevitably bunched at certain times of the year, it might be possible by propaganda to extend these

periods slightly. At present the tendency seems to be for advertising to be concentrated on the days just before holidays and thus to intensify the bunching of demand. Efforts were made in France before the war, in conjunction with "anti-sweating" campaigns, to persuade those members of the public who claimed a social conscience to consider seasonal unemployment and seasonal pressure in making their purchases. A *Ligue Sociale d'Acheteurs*, with a motto "Vivre c'est acheter, acheter c'est pouvoir, pouvoir c'est devoir" was established and published informed advice to customers of good will.¹ A certain number of firms in this country have made efforts along the same lines but without much success. Thus the Co-operative Wholesale Society clothing factories have frequently tried to induce the public to alter their buying habits by publicity campaigns, special discounts to buyers at certain seasons, and special discounts to the retail societies, but without any appreciable effect. Not much, it seems, can be hoped for from consumers.

There is, however, a class of consumers less affected than the general public by fashions and climate. Government Departments, Local Authorities, Railway Companies and similar institutions give from time to time large contracts for clothing—principally uniforms. There is no reason why such bodies should not place their contracts at times when ordinary business is slack. To some extent this kind of work is done by specialized uniform contractors but a great deal of it is carried on by ordinary manufacturers.² Indeed one of the reasons why more manufacturers do not take up Government

¹ See Webb and Freeman. *Seasonal Trades*, p. 59.

² Some kinds of uniform clothing (such as policemen's winter uniform made of heavy Pilots) require special machinery, but in most cases these garments can be made on ordinary machinery.

contracting is that the contracts often come in at a busy season when it would be inconvenient to accept them.

A certain number of local authorities and some Government departments already give their orders at slack times and this kind of consideration is very welcome to the trade.¹ But there is no reason why this number should not be greatly increased.

(b) Stabilization of Production.

It has been shown how in spite of seasonal changes in demand, firms can stabilize their output by making stocks, where they are in a position to anticipate demand, by extending the range of their production, and by getting in orders well ahead of delivery dates. One very significant point brought out by the enquiries is that these methods of stabilizing can only be fully used by the firm which is large enough to finance stocks, to enter more than one market and to induce wholesalers or retailers to place orders when they are required. But the clothing industry is in most sections an industry of exceptionally small firms; these small firms, especially if they are subcontractors, must live on a hand-to-mouth basis and have no means of staving off the seasonal pressure and seasonal slackness of orders.

It may be thought that a stabilizing influence could and would be exerted by the merchants, wholesale and retail, who might be able to translate the spasmodic demands of the public into a fairly stable flow of orders to the manufacturer. In fact, this only happens within a very limited sphere. The wholesaler, to begin with,

¹ In 1925 the Ministry of Health issued a circular to local authorities drawing their attention to this question and urging them to fix the delivery dates for clothing and uniform contracts so that the work could be done in normally slack seasons. See *7th Annual Report of the Ministry of Health*, p. 90.

is being steadily eliminated from the clothing trades, partly because he has almost ceased to perform his important function of holding stocks, partly because an increasing proportion of retail trade is in the hands of the large-scale retail stores. These stores, very often with centralized and highly expert buying departments, in most cases now prefer to approach the manufacturer direct. The manufacturer, too, very often prefers to deal direct with a large stores rather than with a wholesaler.

With the disappearance of the wholesaler, it is left to manufacturer and retailer to carry what stocks are made. But the small retailer—who still, after all, does the greater part of the country's retail trade—is subject to the same forces as the small manufacturer. His market, being small, is too uncertain, and his finances are probably in any case inadequate to permit the carrying of considerable stocks. The large retail store has a more assured market and can afford the expense of holding stocks, but in many kinds of clothing fashion changes are so rapid that even the biggest stores buy practically from hand to mouth. Men's and boys' suits and overcoats, hats, ladies' tailored garments of heavy materials and shirts can, it is true, be bought well ahead and in one very large retail store are normally ordered some three or four months before delivery. The manufacturer receiving such orders can of course avoid sudden rushes and his season will be more spread out. In buying these garments, where fashion changes fairly slowly, the big stores will order largely according to movements in the price of the raw material. An expected rise in wool prices will stimulate the store to buy in good time; a slump in prices will cause the buyer to postpone purchase. Thus the normal interval

between order and delivery, which materially affects the seasonality of production, will vary according to the trend of prices. In general the interval will be long when prices are rising, short when they are falling. In the case of fashion goods, however, the gap between order and delivery is very short indeed and is governed principally by the length of the process of production. Orders will be given just far enough ahead to allow the manufacturer to purchase the materials and to make up and deliver the goods. This period is said to be about six weeks in the case of frocks and underwear. Millinery styles, it will be remembered, change with extraordinary rapidity, and orders are rarely given more than one or two weeks ahead. In short, the buying of clothes subject to fashion, even by large retailers who could afford to hold stocks, is almost entirely on a hand-to-mouth basis. Retailers themselves are largely responsible for the increase of the demand for fashion goods, and, indeed, one of their chief objects is the achievement of a high turnover rate of their stock. Consequently it is hardly to be expected that they would deliberately encourage any reduction in the variety of styles, or the rate at which they change, which would tend to increase stock holding and to smooth out seasonal variations in production.

(c) Mobility and Organization of Labour.

Granted that the demand for labour in the clothing trades must continue to vary to some extent with the season, there are several methods by which the harmful results to the workers might be modified.

Firstly, more thorough training, to make workers more easily interchangeable, would reduce the reserve of labour required to support the seasonal demand while

the extension of systematic short-time working and the reduction of hours in slack periods would distribute seasonal unemployment more evenly. The growth of trade union organization, which is at present notably weak, especially among women, in the clothing trades,¹ could undoubtedly help to achieve both these objectives, as we have discovered in the well organized felt hat making industry. In a well-organized trade it would be possible for employers and union to come to comprehensive and effective agreements covering training and short-time working ; moreover by co-operation in the enforcement of more uniform conditions employers and unions could together succeed in diminishing the high turnover of labour at present found in certain sections of the clothing industries.

Secondly, by the extended use of employment exchanges employers could centralize the supply of and demand for labour, and in this way help to reduce the need for a large reserve of semi-casual workers, and would at the same time get a wider choice of applicants for work.

¹ Approximately one in eight women and one in four men in the clothing trades are at present trade union members.

CHAPTER VII

THE BUILDING INDUSTRY

1. SEASONAL FLUCTUATIONS IN TOTAL EMPLOYMENT AND IN EACH CRAFT

SEASONAL fluctuation in the building industry is due partly to weather changes and to their considerable influence on many building operations and partly to social and customary factors—only indirectly traceable to the weather—affecting the demand for builders' services. Not only seasonal fluctuations but also irregular short period fluctuations are conspicuous features of the industry. Firms are generally small and the amount of work done by each is constantly varying. Periods of employment are, consequently, short for most workers and employment is not only seasonal but, for most of those engaged, casual.

The effect of irregularity on costs is, perhaps, less marked in building than in most seasonal trades because the amount of fixed capital employed is comparatively small. Fluctuations of activity do not therefore imply large reserves of partially unused plant. The small proportion of fixed capital is significant since it not only lessens the force of one important inducement to stabilization but at the same time, by encouraging entry into the trade of small firms without great financial resources, increases irregularity.

The costs of irregularity are not, however, confined to direct overhead expenses. Irregular employment of labour means high labour costs. Moreover, the producers of building materials and accessories, such as

bricks, cement, masonry, joinery and paint, work in factory conditions with a higher proportion of fixed capital and plant than builders themselves. Irregularity of building activity must imply irregular orders to the providers of materials and accessories and thus increase the overhead costs of the latter. Thus irregular building must tend to raise costs and therefore to intensify not only the economic problems of the building industry but the broader and more far-reaching social problem of housing.

On the other hand, there is no doubt that in most building work the cost in winter is somewhat higher than in summer. In winter, work tends to be done less efficiently; darkness comes on earlier, there are more frequent breaks for wet weather and wet and muddy ground impedes the transport of materials. It is estimated that in the case of dwelling houses the additional cost of winter building is something like 2% of the total cost.

Employment in the building industry is normally lowest in January and rises rapidly to the peak in May; there is a slight dip in July but revival to a secondary peak in August. After August employment declines steadily to January.¹ This August peak is most conspicuous in London where August is actually the month of greatest employment. Since London accounts for 20% of the total number insured in building in the United Kingdom, this particular feature of the London industry is generally noticeable in the national figures. In the North-Western Area, on the other hand, there is no sign at all of any rising tendency in August. Though the general pattern is always the same, there are distinct differences in seasonality from

¹ See Appendix III, and Chart I, p. 176.

year to year. The August peak is not visible every year; the depth of the trough varies, being dependent largely on the severity of the weather. Thus in 1929 the trough actually occurred in February, when there was an exceptionally severe frost.

Figures of employment must, however, minimize the extent of seasonal irregularity of actual working, because they make no allowance for overtime or for short spells of unemployment (perhaps of only a few hours) due to bad weather. Thus, the Ministry of Labour's enquiry into hours and earnings in 1924¹ showed that the average number of hours actually worked was 43·2 in a week in January, 45·0 in a week in April, 45·4 in a week in July and 45·1 in a week in October.

On balance, the building industry has expanded considerably during the post-war period but the steady increase of insured workers,² when coupled with the ups and downs of employment—which are partly due to changes in Government housing policy—has meant a heavy load of unemployment of which a considerable part is due to seasonal fluctuations. Average monthly unemployment was in no year less than 9·5% (1925) and averaged 15·4% over the whole period 1924-32.

Average seasonal unemployment during the year was 1·9% in 1924, 3·1% in 1928 and 2·8% in 1932. In fact about 20% of the total unemployment can, on the average, be attributed to the seasonal variation.³ But even at the seasonal peak unemployment was never, between 1924 and 1932, less than 7·0% (1927).

Seasonal fluctuations in the building industry itself

¹ *Ministry of Labour Gazette*, January 1927, p. 11.

² In July 1934, 928,000 persons were insured in the building industry; this figure had increased by 34% from 1924, while the numbers employed increased by 24%.

³ These figures are to be found in Appendix I, p. 285.

naturally spread through the whole group of industries dependent on, or associated with, building.¹ First come the industries providing building materials; stone and slate, cement, artificial stone, bricks, tiles, pipes, paint, and machined woodwork. Nearly all of these resemble the building industry quite closely both as to pattern and amplitude of seasonal fluctuation. The second group of associated industries consists of those which provide finished products essential to house-building but which are not so closely dependent on the operations of the building trade: heating apparatus, light castings, wallpaper, electric fittings. Most of these show a regular seasonal fluctuation but in many the peak season comes in autumn or winter. The demand for their products is mainly a replacement demand, and does not necessarily coincide with the demand for new houses.

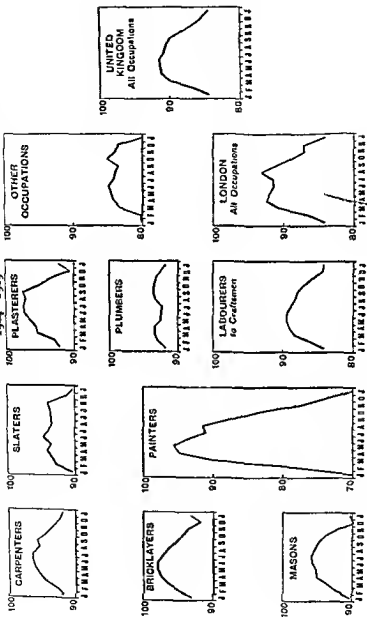
Comparison of seasonal fluctuations in the employment of the different crafts and classes of building workers² throws light on the manner in which different processes are affected by seasonal factors. First come the workers engaged principally on the construction of new houses, according to the order in which their services are required in building operations: bricklayers, carpenters, masons, slaters and plasterers. The seasonal fluctuation is similar in amplitude for all these crafts (though rather small for slaters) but there are certain differences in pattern. The seasons are likely to follow each other according to the successive processes: thus the seasonal decline among masons and plasterers starts later than in the other crafts. An important distinction is that between outdoor and indoor workers. Unfavourable weather directly affects

¹ See Appendix III.

² See Chart I, p. 176.

CHART 1

PERCENTAGE OF WORKERS EMPLOYED IN EACH MONTH IN BUILDING OCCUPATIONS. AVERAGE (EXTENDED MEDIAN)
1924--1929



the former and may make their work impossible ; it only affects the latter if by holding up the outdoor workers it delays those who work inside.

The greater part of building work must necessarily be done not only on the site but also at a certain time in relation to the whole succession of operations. Thus there is very little opportunity for work to be done in advance of demand and for stocks to be carried. The only important exceptions to this rule are carpenters and joiners and masons. An increasing proportion of the woodwork—stairs, doors, skirting, floorboard, etc.—used in building is prepared beforehand in the factory or workshop and has only to be fitted into place as a finished product. Originally, joiners, working in the shop, and carpenters, working in the building under construction, were regarded as belonging to quite distinct trades. Nowadays there is less separation and joiners and carpenters are generally classified under one head.¹ The same tendency has operated in the case of masonry. An increasing proportion of the “ dressing ” or cutting up of stonework is carried out at the quarry or stoneyard and only the fixing of the finished stonework into place remains to be done on the site. The tendency to apply mechanical technique to woodwork and stonework is, indeed, the principal technical change in recent years in the building of small houses. Among carpenters (including joiners) and masons, therefore, there is an increasing proportion of work to be done away from the site ; weather and the necessity for working according to a fixed succession of operations are thus becoming less important. This factor has reduced the day-to-day and week-to-week fluctuations

¹ The Ministry of Labour classes both as carpenters. In the North of England both classes have for some time been known generally as joiners.

among carpenters, joiners and masons but has probably not much affected the general shape of the seasonal curve. The technical obstacles to regular work all the year round may have been largely surmounted but the economic difficulties of anticipating demand and of carrying large stocks still remain.

The crafts so far described are those concerned principally with new construction. Plumbers and painters, occupied largely with maintenance and repair work, are subject to different seasonal variations. Among plumbers, the seasonal fluctuation is considerably less marked than in any other craft; the pattern too, is rather different. There are two seasons, in spring and autumn, the latter extending till December; the summer, on the other hand, is slack. Work on burst pipes and repairs presumably accounts for the large volume of winter activity.

Painters, on the other hand, suffer from a more severe seasonal fluctuation than any other branch. This extreme irregularity is due partly to the highly seasonal demand for painting, partly to the large influx of workers into the painting trade. "Painters" vary from highly-skilled craftsmen to men of very little experience whose work demands less skill than that of any labourers. There is a great deal of painting for instance the painting of factories, which require little experience or skill and there has always been a tendency—especially since the development of machinery—for unskilled workers to flood this industry. The work is casual and consists, for the most part, of intermittent odd jobs. The effect of this is to increase the irregularity of employment.

PERCENTAGE OF WORKERS

100
CARPENTERS

90

Seasonal fluctuation varies, however,

among the different grades of painters. Some idea of the extent of the differences can be got from a comparison of the unemployment figures among members of the National Society of Painters, whose membership comprises mainly the skilled men, with the Ministry of Labour figures. Thus in 1933 the Ministry of Labour unemployment percentage among painters varied between 51% in February and 13% in June, while the National Society's percentage varied between 29% and 5%. In 1934 the Ministry of Labour's percentage at the peak month, May, was 8%; the National Society's percentage was 4%.

Even among the skilled painters, the real craftsmen, the extent of seasonal fluctuation is very serious, but at the busiest time of year the number of unemployed is small. Among the more casual class the seasonal fluctuation is much greater; and not only are the great majority out of work in the slack season but there is a considerable surplus of labour throughout the year.

The remaining building occupations are craft labourers and "other occupations." The former are attached to bricklayers, plumbers, painters, masons and the other craftsmen and the seasonal fluctuations of employment are the same as for the skilled men. The "other occupations" include a variety of workers—excavators, concreters, scaffold hands and general labourers; others are semi-skilled workers, or specialist labourers, required largely for new occupations such as steel erecting, resulting from the introduction of machinery and new technical methods. While seasonal fluctuation is not more severe than for craftsmen, the average percentage unemployed both of craft labourers and of other occupations is very high. The unemployed from other trades tend to drift into the semi-

skilled and unskilled building occupations (among which one may include much painting) and the consequence is a permanent surplus of workers in the sea-grades.¹ Sometimes there are actual shortages at work busy seasons, in certain districts, of bricklayers, plasterers together with a heavy surplus of semi-skilled men and labourers. This tendency for the unemployed to drift into building is not indeed a new phenomenon. In his evidence to the Royal Commission on the Poor Laws² in 1908, Mr. Sidney Webb stated that of the applicants to Distress Committees in London 25% belonged to the building trades and it was stated in the Report of that Royal Commission that trades subject to irregular activity always tend to attract a mass of casual labour intermittently employed and often constituting a difficult social problem.

Wage rates, it used to be thought, compensated to some extent the risk of seasonal unemployment. Thus bricklayers before the war received one penny an hour more than other craftsmen and it was frequently said that this extra penny was accounted for by the greater risk to which bricklayers were subject of being laid off on account of bad weather (mainly for short spells not included in the unemployment returns). Since the war, however, the wage differentials have been largely removed and now craftsmen all receive the same rate in most areas.³ The actual hourly rate is 1s. 5½d. for

¹ "If you looked at the previous industrial occupations of building labourers of forty and over, you would find that it covered the whole industrial range." Evidence of Mr W. Eady, *Royal Commission on Unemployment Insurance*, Vol I, p 118.

² Vol. IX, Q 93066.

³ In a few districts, including some large towns, plasterers receive 1d. an hour more and painters 1d. less than other craftsmen. The employment of painters is as we have seen, subject to more severe seasonal fluctuation than that of any other craftsmen, but the degree of skill required by painters is, on the whole, much less.

and 1s. 1½d. for labourers in large towns, 1d. more in London, and from 1d. to 4d. less

The ~~all~~ towns and rural districts. Piece-rate payment regular~~y~~ rare but does occasionally occur. In most of ~~quar~~ country the working week is longer in summer than in winter—46½ and 44 hours respectively—the duration of the “summer” being determined by Summer Time. But in many towns, including London, hours are 44 a week all the year around.

2. SEASONAL FLUCTUATIONS AND INDUSTRIAL ORGANIZATION

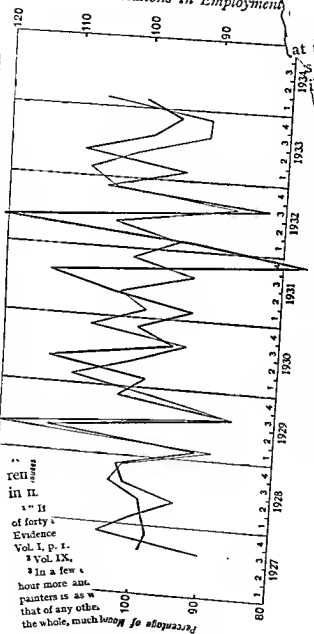
Seasonal fluctuations in the building industry, it has been shown, vary appreciably among the several occupations and processes. There are equally important differences in seasonality between different sorts of building work and between different types of firm.

The only statistics available relating to current production are those giving the value of Building Plans approved by the 146 principal Local Authorities (excluding the London County Council). This series, however, only includes a very small proportion of the total repair work—naturally enough, since only important repairs require local authority sanction. According to the *Census of Production* 1930¹ repairs and maintenance represent 19% of the gross value of the total work done on buildings. But the figures of Building Plans can be used to separate seasonal fluctuations in the construction of dwelling houses and in other classes of work. It must be observed, however, that there is likely to be a time lag between the passing of the plans and actual building.

¹ *Census of Production*, 1930, Part IV, p. 183.

CHART 2

PERCENTAGES FROM THE MOVING AVERAGE IN VALUE OF BUILDING PLANS PASSED



The seasonal fluctuation in plans passed is not very regular.¹ In dwelling house construction the first quarter is usually low, while the second quarter is generally the peak; in the third quarter there is most often a fall, and in the fourth activity generally revives again. Other classes of building seem less subject to seasonal fluctuation: the amplitude of fluctuation is generally less while the pattern is even more irregular than in the building of dwelling houses. The reason seems to be that the building processes used in commercial construction are on the whole less susceptible to the influence of the weather. The use of steel frames, especially, in large commercial buildings makes it possible to work under cover soon after construction has started. Once the frame and floors have been put up the remainder of the work can be done independently of weather conditions.

Repair and maintenance work—especially the small jobs undertaken by small firms and not included in the figures of Building Plans—appears to be much more subject to seasonal fluctuation than new construction. The fluctuation is only partly due to the weather; social habits—for instance, spring cleaning—tend to concentrate the work in certain months, especially the spring, although much of it might equally well be carried on at other times of the year, at any rate during the dry months.

In London a great deal of painting and decoration is done in the late summer when the houses of the wealthy are very often empty. The importance of work on this class of houses may account for the August peak in employment in London.²

¹ See Chart 2.

² See p. 173.

The intensity of seasonal fluctuation varies from firm to firm according to the methods with which firms work and their scale of operation. At one end of the scale are the very large contractors, nearly all situated in London, who concentrate mainly on the organization and financing of the biggest constructions, office blocks, department stores and the like. These firms let out most of the work to subcontractors specializing on particular processes. Next come large general contractors who undertake contracts for business premises, public buildings and also contracts for municipal housing schemes. These firms generally perform themselves several of the processes—such as excavating, concreting, bricklaying, masonry and carpentry—and let out the rest to specialists. As many as a dozen firms—including the manufacturers of electrical apparatus, sanitary ware, etc., who are outside the building industry—may be engaged as subcontractors on a single job.

The third group of firms consists of speculative builders who erect houses not to contract but in the hope of selling (or, less often, letting) them when completed. There is no hard and fast distinction between contract and speculative builders and some engage in both lines. There is, however, a difference in seasonal fluctuation between contract and speculative work. The speculative builder is anxious to sell his houses as soon after completion as possible. Since there appears to be a distinct house-buying season, lasting from about April to September, the speculative builder will slow down his operations at the end of the summer and accelerate operations again about February or March. Contract work is generally much more regular. Fluctuations in work on municipal housing

contracts are partly governed by the times at which contracts are placed, but activity tends as a rule to slow down in winter because of the higher costs and stoppages due to bad weather.

Fourth are the small builders, painters, plumbers, plasterers, carpenters and so on, who undertake little new construction and are concerned chiefly with maintenance and repair work. Since the volume of repair work to be done is very irregular, activity in this class of firm tends to be extremely seasonal.

There is a close connection between size of firm and intensity of seasonal fluctuation in the building industry, as in the other industries studied. The small firms are subject to a wider fluctuation. This is partly due to the fact that the small firms are largely engaged in repair work which, as we have seen, is the most irregular kind of work. But even among firms engaged on new construction, there is reason to believe that seasonal fluctuation is greatest among the smaller firms. The large firms get the large contracts, which usually take a year or more to complete; their work will go on fairly steadily apart from stoppages due to bad weather. The small firms are normally engaged on small jobs and will so far as possible carry them out in summer when conditions are most favourable and when, in the case of speculative building, the chances of selling are best.

As important as seasonal fluctuations are the irregular or casual fluctuations felt by individual building firms but not shown in the figures for the trade as a whole. Employment in individual firms fluctuates a great deal more than total employment in the industry. The activity of a single firm will constantly vary as jobs start and come to an end. Since, as we have

already emphasized, fixed capital in the industry is small these variations do not seriously increase costs or lead to waste of plant but to many of the workers they imply continual changing of jobs and employers. Again, small firms are subject to wider fluctuations than large ones, because the small firms only carry out small-scale operations and because the commencement or conclusion of a single job will affect the small firm more seriously than the large. The man employed by a small firm is therefore likely to receive a smaller average weekly income than his fellow working for a larger company.

This conclusion is borne out by the Ministry of Labour's Earnings Enquiry in 1931, which separated firms employing ten or more from those employing less than ten workers. In the week ended October 24th, 1931, average earnings of building workers in the larger firms were 58s. 6d., in the smaller firms 51s. 5d.¹ Since rates were the same, the difference in earnings suggests less regular work in the smaller firms.

There is another important aspect of the relation between seasonal fluctuation and size of firm. The peak season brings into existence a number of small firms who concentrate on summer working when the demand is sufficient to employ all available resources ; in the slack season these firms operate on a much reduced scale. The existence of these firms makes it possible for the peak demand to be fully satisfied and even encourages the seasonal fluctuations. The effect is therefore cumulative.

In these circumstances it is to be expected that building should be an unstable industry. The remarkably

¹ *Ministry of Labour Gazette*, February, 1933.

high figures of bankruptcies¹ among builders indicate at once the risks of the business and the facility with which firms without adequate resources enter the trade.

3. ORGANIZATION OF THE LABOUR MARKET

In view of the extreme irregularity in the activity of single employers, especially small employers, in building, it is to be expected that the organization of the labour market and the methods of engaging labour should be different from those in most other industries. Legally, in fact, employment of buildings is on an hourly basis; engagements are terminable at an hour's notice on either side. In practice, however, at least a day's notice is generally given. This applies to all workers except the administrative and clerical staff.²

In practice, the length of engagement varies greatly. A very considerable proportion of men are in effect almost permanent employees and either remain with the same firm for years or are able to get a continuous series of jobs without intervening periods of unemployment. These workers can be sure of employment all the year round, except for short spells without work on account of bad weather. This class includes many workers employed in the joinery shops and masonry yards, where conditions of employment resemble those in the factory. Except for these joiners and masons the majority of the "permanent" building operatives are dismissed at the end of each job, though they will

¹ The Bankruptcy Returns show that builders and builders' merchants accounted for 10% of total bankruptcies in 1930, 9% in 1931 and 9% in 1932. Builders, with farmers and grocers, seem to be among the classes most liable to bankruptcy.

² It used to be the custom to keep on apprentices even when there was no work, but this is rare nowadays.

be taken on again immediately the next job starts. When a worker is dismissed but informed of a new job for the same firm elsewhere he has to pay his own travelling expenses. ~~In only a few cases does the period of engagement cover more than one job; in these circumstances a travelling allowance is paid by the employer.~~

The proportion of building workers who drew no Unemployment Benefit during the whole period November, 1921, to July, 1930, is some indication of the relative size of the "permanent" class. The proportion was 32%,¹ but is probably lower now. The proportion is low as compared with other expanding industries; indeed the only important industries showing lower figures are dock service and public works—both highly irregular industries—and certain exceptionally depressed trades—shipbuilding, cotton, coal, iron and steel.

The majority of building operatives are employed on what must be described as a casual basis. They move constantly from one employer to another and their usual period of employment is one job. The jobs may last a few days—in the case of repairing or decorating, for instance—or for months in the case of a big housing contract.²

Since the number of firms is so large, the activity of each so fluctuating, and the number of occupational

¹ *Royal Commission on Unemployment Insurance. Appendices to Evidence.* XXVI §72.

² The period of employment of particular craftsmen, say bricklayers, will of course be only a proportion of the whole period of building. But in big contracts the usual method is to start on a block of a few houses, and then to move each set of craftsmen on to a second block as they finish their particular work on the first. Thus there will be work for bricklayers from the time excavations have finished on the first block until bricklaying is completed on the last block.

sub-divisions among the workers so numerous, it is obvious that if temporary and local scarcities of workers are to be avoided there must be a considerable reserve pool of labour. We have already discovered that this reserve is large at all times of the year in the case of painters and of labourers, and that the chance of even a small amount of casual employment attracts to the building trade large numbers of unemployed workers from other industries. In the other crafts, however, the reserve, as shown by the figures of unemployment, is only slightly more than sufficient to meet the demand during the peak season. In fact actual shortages, for example of bricklayers, are common though they are temporary and generally confined to a relatively small number of towns or areas.¹

It is clear that the existence of a reserve pool of labour itself encourages casual engagements and irregular fluctuations. But the actual size of the reserve required to meet the needs of the industry depends on the efficiency of the machinery for notification and filling of vacancies. While the number of workers required by each firm may fluctuate immensely, the total volume of employment varies relatively little; consequently if the reserve of labour can be centralized it needs only a fraction of the sum of the reserves required by each employer. In principle, the problem of casual labour in the building trade resembles that in the employment of dock labour, though the degree of casualization in building—owing perhaps to the need

¹ For example, there was a shortage of bricklayers and of certain other craftsmen in Manchester during the summer of 1933 and 1934. The Register was not necessarily down to zero: it included a number of "unemployables," men registering but with definite jobs in view, and men who could not do the work required of them—for example, bricklayers who could only work on the ground and not on scaffolding.

for a large proportion of skilled workers—is less extreme. “On no flank of the many-sided problem of unemployment,” wrote N. B. Dearle in 1907,¹ “is there more room for useful work than in evolving a system to substitute a means of finding a regular supply of regular employment for regular hands in place of the present system with its men half-employed, ‘casual’ workers.” How far has such a system been evolved, and how far does it function efficiently?

The employment exchanges are of course the natural solution of the problem and there are few industries in which they can render more useful service than in building. The total number of vacancies filled increased from 63,000 in 1922 to 146,000 in 1929; the increase was one of 138% in skilled and 118% in unskilled occupations.²

A feature of the exchanges' work is the specialized Building Trades Exchange, confined to the building trade, in London³: this exchange was established in 1918 and is assisted by a committee representing employers and trade unions. Applications for employment and for workers come from all over the London area and the exchange acts as a clearing house in respect of the building trade for all London exchanges. The staff includes a number of men with practical experience of the trade. In some areas the trade unions play a very large part in the placing of craftsmen, either filling vacancies themselves or in co-operation with the

¹ N. B. Dearle. *Problems of Unemployment in the London Building Trades* 1907, p. 102.

² See Royal Commission on Unemployment Insurance. Memorandum by Ministry of Labour, Vol. I, p. 452.

³ This exchange, and the Hotel and Catering Trades Exchange (also in London) and the Seamen's and Dockers' Exchanges in ports such as Liverpool are the only specialized employment exchanges.

exchanges. The older methods of engagement, universal before the establishment of the employment exchanges, are still used to a very great extent. Information spreads in various ways—at trade union meetings, public houses and clubs, on the streets, in queues at employment exchanges—about possible and actual vacancies. The unemployed workers, or those with jobs shortly coming to an end, make their way to the site where building is taking place—or perhaps, if the firm is large, to the central yard or office—and apply to the foreman. The applicant must take the chance of wasting perhaps the best part of a day (and possibly the cost of transport) on account of misleading information or of accurate information being so widely circulated that more men turn up at the jobs than can be employed.

In practice, as we have seen, many workers, craftsmen and labourers, habitually follow the same firm, or foreman, and can be more or less certain of a job when that firm, or foreman, has one to offer. The workers attached in this way to a particular firm may not waste much time in useless applications, but they are subject to every fluctuation in the activity of their particular firm. They compose, in effect, a private reserve pool of labour attached to that firm.

In small towns the practice of taking on workers at the site may be fairly satisfactory. The chance of accurate information being circulated is greater than in large cities. The number of possible employers is smaller and they are probably within easy reach of the workers' homes. In large towns, on the other hand, there can be no doubt that the absence or incomplete use of centralized machinery unnecessarily enlarges the unemployed reserve required by the trade and en-

courages irregularity and casualization of employment. We need to enquire, therefore, why the employment exchanges are not more widely used.

An objection expressed in the past by employers that the staff of the exchanges were not acquainted with the occupational sub-division of the building trade. Within each craft, and among labourers, there are always a number of special occupations which can be followed only by experienced men, while some workers are unable to do certain classes of work. Misunderstanding on the part of exchange officials of these often complicated subdivisions may lead to the wrong class of worker being sent to a job. Even if this criticism applied in the past, however, it is generally agreed by employers that the exchange service is now in this respect efficient. In London, indeed, we have seen that the officials at the Building Trades Exchange have practical experience of the industry.

The real reason why employers fail to use the exchanges seems to be their preference, and the preference of their foremen, for complete authority over the selection of workers. The exchange may, it is true, send along several applicants for a vacancy but the choice does not appear to the employer so wide as when a crowd of men appear of their own accord at the taking-on. Partly, no doubt, this preference is based on simple conservatism. Partly it seems to be based on the view that a man who voluntarily makes his way to the job on the chance of employment is likely to be keener than the man sent by an employment exchange. But in addition there are at present, from the employers' point of view, substantial advantages in the old system. Since many men tend always to follow the

exchange, the foreman will know their experience and salaries. It is often believed in the building trade, however, that even when a man is unknown the foreman will be better able to judge his quality at sight than the exchange official. Since there are plenty of opportunities of finding work by voluntary application, the workers themselves naturally stick to the old method, and do not confine their enquiries to the vacancies to which they are sent by the exchange. Thus, even the employer who wishes to use the exchange may find a crowd of applicants on the site. The path of least resistance in such circumstances will be to select the workers he requires from the voluntary applicants.

Moreover, on account of the large fringe of inexperienced and unskilled workers in the building industry—many of them failures in their own trades—the opportunity of a large range of choice may be of some importance to the employer. If this is so, the problem seems to take the shape of a vicious circle. If the pool of casual labour could be reduced, and employment regularized, the inducement to inexperienced or incompetent men to enter the building trade would disappear and employers would be subject to fewer risks in using the exchanges. But so long as the present system of casual engagement persists, and employers fail to use the exchanges, the reserve pool of unemployed must remain necessarily large and an encouragement to casual labour. It is possible, however, that the evident tendency for employers to increase their use of the exchanges may in the course of time break through the apparent deadlock by reducing the incentive to less competent workers to enter the trade.

4. METHODS OF STABILIZATION

What is being done, and what more might be done, to reduce the seasonal and irregular fluctuations themselves and also to reduce the mass of casually employed labour which those fluctuations have brought into the building trade?

We have seen that the seasonal fluctuation in building, and particularly in painting, where it is most intense, is due to a seasonal variation in demand, not entirely accounted for by natural or physical factors. It is quite possible that some part of this fluctuation might be removed by a change in social habits.

The technical obstacles to building and painting and decoration in the winter months cannot, of course, be neglected, though they are sometimes exaggerated. The chief difficulty is the greater risk of bad weather stopping work and thus lengthening the period of construction and raising costs slightly. Normal winter conditions in this country, however, are not necessarily unfavourable to building operations; indeed it is sometimes claimed that bricklaying, for example, is better done in winter when the bricks are more moist. Outdoor painting is, it is true, risky in winter, because of the danger of imprisoned damp but the only objection to indoor painting in winter is that it is more inconvenient than in summer to have painters in the house. The prices quoted for winter indoor painting, on the other hand, are generally lower than in spring and summer, simply because pressure is less. In certain lines, then, more might quite well be carried on in winter.

It would be still more easy to smooth out the

peak in painting; the concentration of activity in April and May, as compared with the summer, is due solely to social and not at all to technical factors. It is the very high level of employment at this period which attracts to the trade the large numbers of casual workers and which, therefore, causes intermittent employment during the rest of the year for the majority of those engaged. The work might well be distributed more evenly over the relatively dry months, the autumn in particular being a very favourable season for painting.

Efforts have been made for some time to persuade people to even out their demand for the services of painters. This propaganda is chiefly carried on by the trade union, the National Society of Operative House and Ship Painters and Decorators, and by the Paint Marketing Council. It takes the form of communications to the press¹ and to local authorities and other bodies responsible for the maintenance of buildings. It is emphasized that contract prices tend to be lower in autumn and winter and that there is then the best chance of the most competent workers being employed. At the height of the rush season the customer may find the work scamped on account of haste, delayed because of the pressure of orders, or unsatisfactorily done because only the least efficient workers are available.

It is doubtful whether propaganda of this kind, unless directed to householders, can have much effect

¹ See, for example, *Daily Herald*, October 5th, 1934. "It Pays to Spring-clean Now. . . . An appeal to housewives to brighten up their homes for Christmas and not wait until the spring, was made yesterday . . . 'If women would not be so terribly afraid of having their houses upset in the autumn and winter,' Mr. G. said, 'there would be more work for painters and decorators.' Mr. G. pointed out that quotations for spring-cleaning were easier in winter. . . ."

unless it be carried out on a much larger scale than at present. Special emphasis should be placed on the lower cost of off-season contracts. It might also be worth while approaching building societies in this connection; those bodies now finance a certain amount of decorating work.

In the United States this propaganda has been much more widely developed than in Great Britain. Certain painting contractors, for instance, regularly circularize their customers or advertise in the press pointing out the disadvantages of activity being concentrated on the peak season and the advantages and lower cost of winter work.¹ Another method is to issue statements showing for each class of work the time of year when adequate supplies of labour are available.² It is worth noticing, too, that the German Government gave a special subsidy in 1933 to householders converting houses into flats and timed the subsidy so that the bulk of the work would be carried out in the winter 1933-34.

More effective and more promising is the propaganda which has been directed extensively to a particular class of customers of the building trade—the Government and local authorities and other public bodies. These are responsible for the construction and maintenance of an appreciable proportion of the total buildings in the country. As regards painting and decorative work the National Society of Painters addresses its appeals especially to these bodies, both directly and by instructing its branches to get into touch with members

¹ *Seasonal Operation in Construction Industries* Report of President's Conference on Unemployment, 1924

² For example, the Boston Building Congress issues the following advice on the best seasons for certain classes of work: (1) Do interior painting and paper-hanging from December to April (2) Plumbing: Make alterations and additions from December or January to April. (3) Heating: Overhaul heating plant when you shut down in the spring, etc. *Op. cit.*, p. 136.

of local councils. It is suggested among other things that school painting should be carried out in the Christmas holidays ; at present it is more usually done in the summer. The response from local authorities has varied but in most areas, it is declared, they have at least given attention to the problem. It is stated that the Office of Works now places nearly half its painting and decorating work in hand between October and March and that the General Post Office regularly gives instructions that as much decorating work as possible should be done in winter.¹

Much can be done by those local authority departments which employ workers on the maintenance and repair of their own buildings. In Manchester, for example, a single Works Department is in charge of the upkeep of all Corporation buildings except those coming under the jurisdiction of the Housing, Transport and Education Committees. The Works Department employs a staff of about 400, including representatives of all building crafts, among whom painters make up the largest number. The work is arranged so as to give as many as possible of these workers regular employment all the year. Little outdoor painting work is done in December, January and February but there is enough indoor work to fill those months. Where the maintenance of buildings is in the hands of a large number of departments, it is much less easy to ensure the same degree of regularity. In most cases, the work is not considerable enough to be spread out at all evenly, nor is there so great a variety of jobs that, when weather is bad, men can always be turned on to

¹ In 1924 and 1925 the Ministry of Health issued circulars to local authorities asking them to arrange so far as possible to do painting and interior decoration during the autumn and winter months. See *6th Annual Report of Ministry of Health*, p. 76.

indoor work. Housing departments, too, can space their maintenance work so as to minimize irregularity of work by concentrating indoor painting on the winter and outdoor painting on the summer.¹

As regards new building, there is an opportunity for the Government and local authorities to play considerable parts in smoothing out seasonal and irregular fluctuations. Local authorities were responsible in 1933 for over a quarter of the total new dwelling houses built. Hitherto rapid and often unexpected changes in national housing policy have prevented local authorities from planning their work ahead—whether contract or direct labour—with much confidence. A long-term and stable programme would allow local housing departments to arrange their activities so as to avoid more than a minimum of fluctuation. The suppliers of materials and accessories, too, if long-term orders were assured, would be more likely to embark on new and cheaper methods involving more mass production and standardization.

It appears likely that efforts will be made by the Government for some time to come to increase the volume of building activity by legislation and subsidy. Already, however, at the peak season almost all available skilled workers are employed.² It is true that there are considerable proportions of labourers out of work all the year round, but building cannot go on without the craftsman. If building activity is to increase, then, either new craftsmen will have to be

¹ Complete regularity is probably impossible, unless a good deal of outdoor work is done in winter, because there is generally less indoor than outdoor painting. The Manchester Housing Department, for instance, employs a maintenance staff of about seventy or so workers but about a quarter of these are generally laid off in winter.

² See Chart I.

brought into the trade or else the new building must be concentrated on those times of the year when there are adequate supplies of labour. The second alternative is probably to be preferred and would be achieved if local authority housing departments, in choosing their time for placing contracts, took into account the position of the labour market.

We must next consider those factors in stabilization which are connected with new developments of technique. We have seen that the growing use of the steel frame method of construction has rendered building operations much less susceptible to the influence of weather, but hitherto this method has only been applied to large commercial buildings though it is being extended to big blocks of flats. In this class of work, the new technique has undoubtedly led to the smoothing of seasonal fluctuations, not only because the actual erection is almost independent of weather conditions but also because some of the components—the metal frame for instance—are produced in the factory and only require assembling.

In the main processes of building ordinary dwelling houses any increase of winter building must largely depend on reduction of the extra cost.¹ Technical development in this class of building has hitherto been slow but methods are available by which the difficulties and risks of winter construction may be reduced or avoided. Thus chemical mixtures can be used to prevent the freezing of mortar: the work under construction can be protected from the weather by canvas covering and artificial heating. Another method which facilitates winter building is to make only the outer walls of the house structural walls. Thus the

¹ See p. 173.

outer walls can be built first and the interior walls put up after the roofs and floors have been put in. In this way there is indoor work available for bricklayers in wet weather. The growing tendency to prepare joinery and masonry away from the site reduces the technical obstacles to stabilization and it is in the increase of the amount of work done in factory conditions that the best prospects of stabilization lie. Since, however, the variety of patterns is so great, production of these commodities in advance of demand is not easy, and as a rule only small stocks are held. There is probably considerable scope for further standardization of building components. For some—bricks and steel casement windows for instance—standard dimensions have already been adopted, and a scheme for the standardization of designs of baths has recently been accepted. Standardization could be extended to many other building units—doors, skirtings, dressers, sanitary fittings, etc.—and could lead both to reductions in costs and to stabilization of the rate of output. This would affect, of course, the industries producing accessories to building rather than the building industry itself.

Another subsidiary industry in which the technical obstacles to regular operation have been much reduced is brickmaking (which used to be a highly seasonal trade) owing to the extensive supersession of the old beehive type of kiln by the continuous Hoffman process and to the substitution of artificial drying for the lengthy process of drying in the open air.

In painting, the use of synthetic paints, of which successive coats can be applied very rapidly, reduces the risk of the work being spoilt by wet weather. The interest of the manufacturers of building materials in

stabilization of the building industry is exemplified by the part played by the paint manufacturers in propaganda to even out demand during the year.¹

It may be suggested that since the manufacturers of materials and accessories—bricks, paint, joinery, masonry—have at least as great an interest in the regularizing of activity in the building industry, it might well be to their advantage to adopt a definite policy of seasonal price discounts. Quite a small reduction in winter prices of materials would compensate for the slightly higher costs of winter building (estimated at about 2%).²

It is interesting to notice that in the United States, where somewhat different construction methods are used from those in Great Britain, there appears to be no technical reason why the seasonal fluctuations in new construction activity should not be almost completely abolished.³ The technical difference lies in the fact that while brick is the predominant material in building in this country, in the U.S.A. it is estimated that only one house in six is of brick.⁴ Building with concrete products and by the steel frame method—considerably more extensive in the U.S.A. than in Great Britain—is, as we have seen, very much less subject to weather conditions than building with bricks.

One obstacle to the introduction in Great Britain of new technical methods which might increase regularity

¹ See p. 195.

² See p. 173.

³ "It may be stated without fear of contradiction that both from an engineering and quality standpoint any type of modern building construction can be accomplished . . . fully as well in the winter months as at other seasons, if the proper protection during the progress of certain parts of the work is provided." *Seasonal Operation in the Construction Industries* (1934), p. 103.

⁴ *Economic and Manufacturing Aspects of the Building Brick Industries* (1933) Department of Scientific and Industrial Research, p. 4.

of building activity is to be found in the local building regulations. These regulations were framed to deal with traditional building methods and often impede the development of new technique.¹

Irregular, as distinct from seasonal, fluctuations in the activity of particular firms cannot be much affected by outside factors since they are inherent in the organization of the industry. It may be noted, however, that fluctuations are largest among the smallest firms and that any tendency towards increasing the average size of firm would probably have a stabilizing effect. It appears, too, that there is room for a more careful planning of work. Since up to a dozen firms may be engaged on a particular contract, considerable organizing capacity is required to avoid delays and to ensure that each of the subcontractors in the sequence may be able to plan his own activity and know exactly when he can start work on each job. At present, owing to uncertainties and delays, the contractor is often quite unable to say what his own demands for labour are likely to be. The method adopted by the more efficient firms is to draw up before operations begin a "Time and Progress Schedule," providing in advance for the whole sequence of operations. Everything depends, of course, on each of the firms concerned adhering strictly to its own place in the programme.

The possibilities of increasing the regularity of employment of workers in the industry by more efficient organization of the labour market have already been discussed. By the more extensive use of the centralized machinery of the employment exchanges, the aim of more regular employment could be achieved. If, as is suggested above, employers could foresee and

¹ See *Housing England*, P. E. P., for examples.

plan their labour demand, and if they could inform the exchanges of their probable future requirements, the demand could be supplied from a much smaller reserve pool. But it should be emphasized again that extreme irregularity of work produces a large reserve of casual labour, and the large reserve makes possible and indeed encourages extreme irregularity. Any reduction of the reserve might, therefore, have the effect of reducing the irregularity in demand. Occasional local shortages of skilled workers at the peak season occur already and result not only in full employment of those available but also in more regular activity on the part of building firms.¹

It may be concluded that although, with present building technique and the present organization of the industry, some seasonal fluctuation and considerable irregularities in the demand of individual firms for labour are bound to continue, yet there are several ways in which these fluctuations and consequently building costs might be much reduced. The most promising are the development of new methods more closely resembling factory work ; more careful planning by central and local authorities of their contracts, both for building and decoration ; the more widespread use of propaganda, coupled with seasonal discounts on a regular basis, to induce the public to alter the seasonal distribution of its demand ; and the centralized organization of the labour market, especially of unskilled labour and of painters, by the extended use of employment exchanges.

A considerable amount of seasonal unemployment is

¹ For example, it appears that the seasonal fluctuations in employment of bricklayers in Manchester have been to some extent smoothed out in 1933 and 1934 by the shortage of labour at the peak season.

certain to persist in the building industry. What measures might be taken to alleviate the effects of these fluctuations in the economic position of the worker? Like the clothing industry, building has for long been one of the principal industries subject to considerable seasonal unemployment. But unlike the clothing industry, building is a trade in which the great majority of workers are principal wage-earners with families dependent upon them. Since, too, builders have always been among the most highly unionized groups of workers in the country, it might be expected that in various ways organized efforts would have been made to counteract the disadvantages of regular seasonal unemployment.

The obvious form for such organized efforts to take is that of insurance against unemployment. But in spite of the strength of the building unions, out-of-work pay has never been a general feature of their activities. In 1908 out-of-work pay was paid only by the carpenters' unions, by one society of painters and by plumbers. The only monetary assistance given by other unions was the travelling allowance.¹ The reason for the absence of out-of-work pay was simply the high cost and the high subscriptions that would have been required. As it was, such Unemployed and Travelling Benefits as were paid by the building unions came to 15s. 5d. per head of total membership in 1906, while the average for all trade unions was 8s.² Sidney Webb, in his evidence to the Royal Commission on the Poor Laws, in 1908 (Q. 93104) stated that the Plumbers' Union, who had only just instituted out-of-work pay,

¹ Travelling benefits were often nearly as high as unemployment benefit, e.g., the Operative Bricklayers' Society in 1908 paid 1s. 6d. a day for eight weeks in a half year

² *Royal Commission on Poor Laws*, Vol IXA, App XXI (C), p. 625.

were already finding it a "very severe drain indeed" on their finances.

More informal methods of "insurance" against seasonal unemployment were common before the introduction of the general Unemployment Insurance scheme.¹ Small "Hard-Up Clubs" existed, to which a few friends would contribute while in work to relieve members unemployed. A few workers, especially skilled men with relatively high wages, would regularly put by some of their earnings but the difficulty about this form of saving is that no particular worker knows whether he will be unemployed or not during the slack season. Others workers, especially painters, regularly ran into debt in the slack season, repaying, if possible by overtime earnings, when they became employed again. A variant of this method was the regular pawning of furniture in the winter and the redemption of it in summer. This latter device may, as suggested by Mr. Dearle,² "enable a solid and usually calculable lay-by to be made, the certainty of the return often being very great," but, like regular borrowing of money at the high rates usually charged to the working class for short-time loans, it is a particularly expensive form of insurance.

In 1911 Unemployment Insurance was instituted in a number of trades, including building. The trades selected were those in which "unemployment is due . . . to a temporary oscillation in their range of business."³ Contributions and benefits were at first low, the latter being intended not to afford full sub-

¹ See N. B. Dearle. *Problems of Unemployment in the London Building Trades* 1907, pp. 137-42.

² *Op. cit.*, p. 140.

³ Mr. Churchill, speaking on the Bill. Quoted in *Royal Commission on Unemployment Insurance*, Final Report, p. 12.

sistence but to assist the worker in tiding over short spells of unemployment. Since 1911, of course, Unemployment Insurance has been the principal method of reducing the distress arising from seasonal fluctuations.

Unemployment Insurance, however, only covers a part of the ground. It is confined to complete days of unemployment and is then only given after a waiting period of three days.¹ But a good deal of the unemployment in the building trades, associated with wet weather and with odd days spent searching for jobs owing to the high turnover rate of labour, goes uncompensated. It has often been proposed that there should be a system of supplementary "wet-time insurance," especially for those crafts subject to considerable interruption from bad weather. Both employers and workers would contribute and benefits would be paid in respect of every period of, say, less than four hours wasted on account of rain.

Another method of evening out earnings over the busy and slack season—a method practised to some extent in the motor and clothing industries and very extensively in coalmining—is that of spreading the reduced volume of work by short time. This practice has never been adopted on a wide scale in the building industry. The nearest approach to it is the shorter working day in winter, but this has been made necessary by considerations of efficiency rather than of employment. Moreover, the tendency now, as we have seen, is to reduce summer hours to the winter level so that it is quite likely the difference will disappear.

¹ The continuity rules, however, allow that any three days of unemployment, whether consecutive or not, within a period of six consecutive days are regarded as a continuous period of unemployment, and any two such continuous periods separated by not more than ten weeks are regarded as one continuous period of unemployment.

A further method of alleviating the effects of seasonal fluctuation is that of dovetailing building with other occupations. In seaport towns painters, decorators, joiners, plumbers and electricians may be able to find work in their own line in shipbuilding and ship repairing where the seasonal fluctuation (especially in ship repairing) is rather different from that in building. This happens already to a certain extent¹; although rates are lower in the ship yards than on shore the chances of overtime are greater in the former. There is not the same opportunity now as there used to be for unskilled building workers to find occasional work at the docks, since registration schemes have limited dock work to those regularly engaged. In any case, the seasonal fluctuation in dock service, though of a different pattern from that in building, is not very marked. Outside seaport towns the unskilled worker has a better chance of off-season employment than the tradesman. But even for the labourer there are few opportunities; most of the trades which he might enter temporarily, such as public works contracting, are subject to much the same pattern of seasonal variation as building. There appears to be no prospect, therefore, that the dovetailing of building with other occupations makes or can make any serious impression on the problem of seasonal unemployment.²

¹ P. Ford. *Work and Wealth in a Modern Port* (Southampton), p. 85.

² Another form of dovetailing is to follow two building crafts. The seasonal pattern in plumbing is different from that in most other occupations; it was once—but is no longer—a frequent practice for a boy to become apprenticed both to plumbing and painting.

CHAPTER VIII

WHOLLY SEASONAL OCCUPATIONS

IN the occupations surveyed in this chapter the busy season, which is generally the summer, brings a very considerable influx of additional workers, most of whom either do not work at all or work in completely different occupations during the rest of the year. These workers are therefore in a class of their own and the problem of employment is for them quite a different one from that of the workers in the clothing or motor industry, since the latter have after all a good chance of work during the greater part of the year. Moreover, workers in the seasonal occupations here described are now treated rather differently from other workers by the Ministry of Labour in the administration of Unemployment Benefit. Indeed the extent to which they were able to get benefit when unemployed was regarded as one of the chief anomalies giving rise to the Anomalies Regulations of 1931.

The principal trade concerned is work in holiday resorts. During the summer season a vast if temporary army of domestic servants for hotels and boarding houses, waiters and waitresses, bus drivers and conductors, beach attendants, shop assistants and providers of entertainments, sports and games is collected in seaside and other resorts to serve the host of holiday makers. These workers make up the largest proportion of the total dealt with in the present section *and deserve separate treatment.* Another very large group consists of temporary workers in agriculture and

horticulture, such as fruit pickers ; these, however, are dealt with in the following chapter together with other agricultural workers. The remainder include workers in the fishing trade (fishermen and fish curers, the latter mostly women), ice-cream vendors, workers in malting and distilling and in jam-making, and temporary workers at the Christmas season in retail shops and the Post Office.

The total number of persons covered by these categories is unknown. Special counts have, however, been made of the number of unemployed "Seasonal Workers" (using the term "seasonal" in this restricted sense) on the Exchange Registers at certain dates. Most of the trades are summer trades, so the maximum number are probably unemployed in January. In January 1931 it was found that there were 12,849 of these workers on the Register (4,356 males and 8,493 females).¹ Since this figure represented only 0.7% of the total unemployed at that date, it is clear that the problem of seasonal unemployment in this restricted meaning is of relatively small dimensions. But to arrive at the total engaged in these seasonal trades it would be necessary to add to the 12,849 all who were in employment (either in a winter seasonal trade or in some other trade than their main occupation), all who did not register as unemployed and all in uninsured occupations.

I. TEMPORARY WORKERS IN HOLIDAY RESORTS

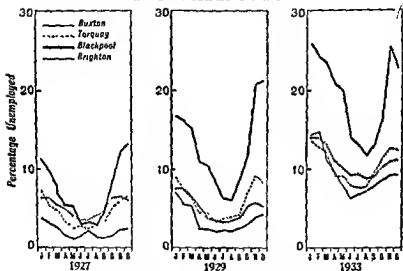
The holiday season may be regarded as lasting for about four to five months, starting in May and ending in September. The exact limits will depend on the

¹ *Ministry of Labour Gazette*, August 1931, p. 292.

dates of Easter and Whitsuntide, the weather and of factors. Some idea of what the holiday trade means in terms of employment can be got from examination of the unemployment statistics for a few of the principal holiday resorts. The seasonal fluctuation of the

CHART I

MONTHLY PERCENTAGES OF ALL INSURED WORKERS UNEMPLOYED
IN FOUR HOLIDAY RESORTS



(From the Local Unemployment Index)

total unemployment percentage in 1927, 1929, and 1933 in four selected holiday towns—Buxton, Torquay, Blackpool and Brighton—is very marked indeed.¹ The amplitude of fluctuation is greatest in Blackpool, not favoured as a winter resort, and least in Brighton which retains its attraction even during the winter. These fluctuations of employment are felt by men,

¹ See Chart above.

women and juveniles, but in some resorts, for instance Blackpool and Brighton, the proportion of males unemployed remains high even at the height of the season when women and juveniles are almost all employed. The holiday trade even affects school children; thus in Barmouth the school holiday was specially altered in 1933 in order to allow school children under fourteen to act as caddies on the golf links, as errand boys and in other occupations during the busy season.¹

The percentage of insured unemployed in the towns concerned appreciably underestimates the actual amplitude of the seasonal fluctuations in employment in holiday resorts. In the first place, a great many of the workers in the summer season, included among the insured at the July exchange of books, come from other districts. In the winter, when many of them are likely to be unemployed, these seasonal migrants will of course register at their home towns and not at the seaside resort. Secondly, there are probably a certain number of insured seasonal workers who are residents of the seaside resort but who do not trouble to register in the winter as out of work because they know that they will not be allowed benefit under the present regulations. Moreover, seasonal holiday work must affect a great many uninsured persons who do not earn at all in the winter. Lodging-house keepers, for example, make their whole annual income during the few months of the holiday season. For the majority of these seasonal workers, the spell of four or five months' work during the summer holiday is the only employment they get during the year. A Ministry of

¹ Report of meeting of Barmouth and District Education Authorities, *Manchester Guardian*, 5-7-34.

Labour enquiry in 1930 showed that not more than 20% or 25%—the proportion varied from one occupation to another—obtained any work during the off-season and that those who were able to find other work were not employed on the average for more than two or three months outside the season.¹

It will easily be understood that the organization of the labour market in the case of holiday workers presents considerable difficulties. The sudden emergence of a considerable temporary demand for labour in the holiday resorts is accompanied by the incursion of an army of applicants for work. When it is left to individual employers—most of them needing only a very few persons—and to individual applicants to make the necessary contacts, a certain amount of avoidable friction and waste of time and effort is bound to follow. The result is, in fact, that a remarkably large proportion of seasonal workers are unemployed even in the season. The proportion of seasonal workers who become unemployed at some time during the season varies from 66% in the case of waiters to 25% in the case of female attendants.² The average number of days for

¹ Table III, Section (a) p. 224. The enquiry on which section (a) of the Table is based covered the records of all seasonal holiday workers who were on the unemployed register in January 1931—a period when the maximum number of holiday workers are likely to be unemployed. Since almost all holiday workers are unemployed at some time during the off-season the results of this enquiry may be regarded as representative of the employment records of holiday workers generally.

² See Table III, Section (b). The Ministry of Labour enquiry on which section (b) of this Table is based relates to a one-third sample of the holiday workers who were disallowed benefit under the Anomalies Regulations of 1931 during the three months from September to November, 1933. The seasonal workers disallowed benefit (see p. 218) are mainly those who have no reasonable chance of employment during the off season. This class cannot be regarded as perfectly representative of all seasonal workers, and it is possible that their employment records during the season are worse than the average.

which unemployment benefits or transitional payments were received by those who suffered unemployment varied from fifty-one (nearly one half of the season) in the case of waiters to twenty-five in the case of female attendants. The average percentage of seasonal workers unemployed at any particular time during the season must therefore have varied from about 25% in the case of waiters to $4\frac{1}{2}\%$ in the case of female attendants. It is clear that the holiday resorts tend to attract a much larger number of workers than are actually likely to obtain anything like full time work and that many of them only succeed in obtaining a number of short-lived jobs between which they undergo considerable spells of unemployment. This form of casual labour is particularly noticeable among waiters and is generally more prominent among men than among women.

It is clear that there is a very strong case for the centralized and co-ordinated organization of the holiday labour market in order to reduce the waste due to casualization. During the last ten years the employment exchanges have been taking an increasing part in the placing of holiday workers and are now doing a large portion of the work. Thus in 1933 over 55,600 vacancies for holiday workers were filled by the employment exchanges.

The Ministry of Labour adopts special methods in order to deal with this rather specialized section of the labour market. Early each year a personal canvass is made of prospective employers—hotel proprietors, boarding-house keepers, restaurant proprietors and the like. At the same time all exchanges go through their registers and interview any unemployed persons thought suitable for this type of work. In some cases

exchanges in holiday resorts are specially linked up with exchanges in areas where considerable numbers of applicants are likely to be available. In many cases the exchanges advance the fare to applicants who require assistance to enable them to travel to the holiday town for work. Contacts are maintained by the Ministry of Labour with local social organizations which are likely to take an interest in the welfare of the workers away from their homes.

The number of vacancies notified to the exchanges and the number of those vacancies filled¹ increased steadily from 1930 to 1933, the placings reaching a figure of 55,600 in 1933, 41,700 being of females, 13,900 of males.² The percentage of vacancies notified which the exchanges were able to fill increased from 1930 to 1932, but in 1933 fell slightly, to 86.5%. It is clear from this figure that in many cases the supply of available labour is not equal to the demand. A fairly steady proportion (about 40%) of the vacancies have to be filled by bringing in labour from other districts. The proportion of males from other districts is much smaller than the corresponding proportion of females; for example, in 1933 the proportions were 18.3% and 45.1% respectively. The reason is that quite often in seaside towns there is a demand for female labour much greater than the available supply, while the number of males unemployed is quite high. In such circumstances, female labour will be "imported" from other districts, but efforts will be made by the Ministry of

¹ It should be remembered that the jobs filled are of different degrees of permanence. In some cases a placing is for the whole season, in others a placing may represent simply the engagement of an extra waiter for a single meal. Thus the figures of placings give no indication of the average employment over a period.

² See Table I, p. 222.

Labour to encourage so far as possible the employment of local male labour in preference to the unnecessary introduction of men from other areas.

Nearly half the seasonal workers at holiday resorts are domestic servants, the majority "living in." The only other large class consists of waiters and waitresses (many of whom "live in"), but shop assistants and transport workers represent appreciable proportions. It should be noticed that workers in a great many occupations which go on all the year round, even in seaside resorts, need considerable augmentation during the season; clerical workers, laundry hands and shop assistants are examples.

In resident domestic service, both in hotels and boarding houses and in private houses, a larger proportion of the vacancies is filled by workers coming from other districts than in any other occupation. Nearly two-thirds of the workers in hotels and boarding houses come from other districts. This figure is also high (nearly 40%) among waiters and waitresses. In all other occupations the great majority of workers needed can be supplied locally.

The seasonal holiday workers are recruited from a variety of sources. Some are normally domestic servants, in town hotels or in private houses, who regularly take summer jobs at holiday resorts. Others are not gainfully occupied at all during the off-season. Others, again, are unemployed industrial workers. It seems likely that the great expansion of population during recent years in certain seaside resorts (for example, Blackpool) is due in part to an influx of unemployed industrial workers from depressed areas. These workers may be attracted in the first place by seasonal jobs, but since the chances of work are at

least as good as in their old homes, and the amenities of life are considered substantially better, they often become permanent residents.

2. OTHER WHOLLY SEASONAL OCCUPATIONS

It remains to deal with a miscellaneous group of seasonal occupations.¹ The largest number both of men and women are found in the fishing trade. All fishing is not wholly seasonal, as the chart for the fishing industry (see App. III) shows. Salmon and herring fishing are the most important seasonal fisheries but all kinds are liable to a certain reduction of activity in winter owing to stormy weather. In the herring trade, a very large proportion of the fishermen are "share fishermen" working on a profit-sharing basis and not under a contract of service; these men are not covered by Unemployment Insurance. Salmon fishers are the largest group of seasonal workers. Their season, of which the limits are arbitrarily set, lasts over six months as against four months in the case of other seasonal fish workers; the proportion who got work out of season, generally in agriculture, sea-fishing or as seamen, was considerable—nearly 60% as compared with under 40% in the case of other male workers and only 8% in the case of females; the proportion who were unemployed at some time during the season was low, 28.5% as compared with the high figure of 81.6% of other male workers, and 74.7% of female workers; among female kipperers the proportion was even higher, but the sample very small.

¹ See Table IV, p. 225. The Tables based on the same enquiries as those used in Table III, and the remarks relating to that table in the footnotes on pp. 211 and 212 refer also to Table IV.

The fishing seasons vary in different parts of the country, and both fishermen and curers are often able to follow the season round the coast. They move, for example, between East Anglia, where the season lasts for about ten weeks from October to December, and Scotland—Wick, Stornoway, Peterhead, Aberdeen and other ports—where there are two seasons of about ten weeks each, in winter and summer, the fares of the women curers being generally paid by their employers. Since the average number of weeks worked in the season is seventeen in the case of female fish workers, it would seem that most of them are able to find work during more than one of the local seasons.

For maltsters, the season lasts about seven months and an appreciable proportion, over 20%, get non-seasonal work in addition. Ice-cream vendors have a season of five to six months. About a quarter of them find work in the off-season; nearly half, however, suffer unemployment (for a month on the average) during the season. Women jam workers are an important class; the season lasts about four months. Only 12% find work in the off season, and over 41% are unemployed (for a month on the average) during the season.

3. THE UNEMPLOYMENT INSURANCE SYSTEM AND WHOLLY SEASONAL WORKERS

The insurance against unemployment of these seasonal workers—workers who are invariably and inevitably unemployed for a large part of the year—clearly presents rather a special problem. Persons engaged in wholly seasonal work, as has been shown, are not only unemployed during most of the off-season, but are also liable to considerable spells of unemployment

during the season. No special problem arises in connection with unemployment during the season ; the risks then are no greater than in many other non-seasonal industries. But unemployment during the off-season is a more difficult matter to deal with, not so much because the proportion of unemployed is exceptionally high as because many of the workers concerned have no reasonable chance of work ; some, indeed, such as married women in Scotch fishing towns who work when the season is on at their homes but who cannot leave their families and follow the trade (or any other trade) elsewhere, do not expect or require work outside the few months of the season.

It is, however, only since the 1931 Unemployment Insurance (No. 3) Act of 1931, which gave power to the Minister to make regulations to deal with anomalies, that seasonal workers have been specially affected by the legislation on unemployment insurance. By seasonal workers is meant only workers whose normal employment is employment of a seasonal nature for a part of the year only ; the classification includes the occupations described in previous sections of this chapter and the temporary workers in agriculture and horticulture, such as fruit pickers, whose conditions are described below. Workers in the building, clothing and similar trades, who have at least a chance of perfectly regular employment in their normal occupations, are not covered by any special regulations.¹ They get Unemployment Benefit in the ordinary way, provided that they fulfil the statutory conditions.

¹ The Regulations only apply to occupations in which employment is in effect limited to a certain season. Thus a particular tailoring machinist may regularly be employed during six months of the year only, but since machining goes on all the year round she will not be within the scope of the regulations affecting seasonal workers.

Before 1930 workers in wholly seasonal trades—like clothing or building workers—were entitled to benefit if they satisfied the ordinary statutory conditions, that is to say, if thirty contributions had been paid in respect of them during the two years prior to the application for benefit and, more important, if they could prove that they were available for, and genuinely seeking, work. It will be remembered that very considerable difficulties arose in the administration of the “genuinely seeking work” clause; in dealing with seasonal workers the principle was accepted that where in any particular district there was none but seasonal work available, applicants could not be held to be available for work (and eligible for benefit) during the off-season if their domestic circumstances precluded employment away from home.

A corollary to this umpire’s ruling was a clause in the 1927 Act to the effect that workers in occupations of a seasonal nature which did not ordinarily extend beyond eighteen weeks in the year, who were not ordinarily employed in any other employment, could obtain a certificate exempting them from paying contributions to the Unemployment Insurance Fund.¹ Up to the end of 1929 about 2,000 certificates had been granted under this clause.

With the 1930 Unemployment Insurance Act came an important change. The “genuinely seeking work” clause was repealed and it became very much easier for seasonal workers to obtain benefit in the off season, up to the limit allowed by their previous contributions, even though they might have no chance of work in their

¹ The worker with an exemption certificate paid no contribution and received no benefits, but the employer paid his share of the ordinary contribution in respect of such a worker and the Exchequer paid a contribution equal to half the employer’s contribution.

own districts and no intention of seeking it elsewhere. Evidence of the easier conditions prevailing is found in the numerous applications for cancellation of the exemption certificates issued under the 1927 Act. The easy conditions of benefit for seasonal workers were indeed regarded as one of the "anomalies" giving rise to the 1931 Act.

On the recommendation of the Interim Report of the Royal Commission on Unemployment Insurance, the Anomalies Act of July, 1931, gave power to the Minister of Labour to make special regulations regarding seasonal workers. These regulations, issued in October, 1931, and amended in 1933¹, make it necessary for a seasonal worker applying for benefit in the off-season to prove (a) that he has been in insurable employment to a substantial extent² either during the off-seasons of each of the previous two years or during the off-season of one of the two previous years and the current off-season and (b) that he can reasonably expect to obtain insurable employment for a substantial period during the current off-season, taking into consideration his industrial experience and the industrial circumstances of the district.

The effect of these regulations has been that a very large number of seasonal workers previously in receipt of benefit are now unable to satisfy the conditions. Each year since the regulations began to operate about 20,000 persons have been disallowed benefit.³ There has been considerable criticism of the anomalies and

¹ *Ministry of Labour Gazette*, September, 1933, pp. 350-351.

² The view taken is that employment for 25% of the off-season is employment to a "substantial extent."

³ A certain amount of duplication occurs in these totals, because a number of claimants whose circumstances have changed, made claims in more than one off-season during the period covered.

hardships caused by the Seasonal Workers Orders and in August, 1935, an amendment came into force which mitigates somewhat the severity of the regulations. Certain workers are now exempted from the definition of seasonal workers, including persons with good insurance records during the last ten years. It is estimated that the new amendment will reduce the annual number of disallowances by nearly a quarter.¹

¹ *Ministry of Labour Gazette*, August, 1935.

TABLE I.—MINISTRY OF LABOUR PLACINGS IN HOLIDAY RESORTS

	VACANCIES NOTIFIED			VACANCIES FILLED						Vacancies filled	
	M	T	Total	Local Applicants			From other districts			All Applicants	
				M	T	Total	M	T	Total	M	T
1930	9,734	41,533	51,267	6,556	17,378	23,934	1,678	14,061	15,739	8,231	31,439
											39,673
											60.3
											39.7
											77.3
1931	10,147	44,834	54,981	7,413	20,721	28,134	1,660	16,186	17,846	9,073	36,907
											45,980
											61.2
											38.8
											83.7
1932	12,044	46,025	58,069	9,438	22,509	31,947	1,859	17,099	18,949	11,297	39,599
											50,896
											62.8
											37.2
											87.6
1933	15,122	49,247	64,369	11,370	22,843	34,213	2,556	18,823	21,379	13,926	41,666
											55,592
											61.6
											38.4
											86.5

Source : Ministry of Labour Gazette.

TABLE II.—HOLIDAY RESORTS, VACANCIES NOTIFIED AND FILLED, MALES AND FEMALES,
BY CHIEF OCCUPATIONS, 1933

	Notified	Locally Filled	Filled from other districts	Total Filled	Vacancies Filled		
					As % of Total filled		As % of Notified
					Locally	Other Districts	
Resident Domestic : Hotels, Boarding Houses	23,999	7,118	12,798	19,916	35.7	64.0	83.0
Private Houses ...	724	212	216	428	49.5	50.5	59.2
Non-resident Domestic ...	9,406	6,976	417	7,393	94.4	5.6	78.4
Waiters and Waitresses ...	17,837	10,649	6,560	16,609	60.5	39.5	93.1
Cleaners, Charwomen, etc. ...	840	766	13	779	98.5	1.5	92.6
Shop Assistants ...	4,082	2,975	558	3,533	84.2	15.8	86.5
Transport Workers ...	1,810	1,608	117	1,725	93.2	6.8	95.3
Canvassing, Typists, Clerks, Cashiers, etc. ...	1,399	1,114	143	1,257	88.6	11.4	89.8
Cloakroom, Bathing Tent, & Lift Attendants	566	524	17	541	96.6	3.4	95.5
Laundry Workers ...	948	723	169	892	81.0	19.0	94.1
Sportsground, Race-course, etc. Workers ...	727	557	122	679	82.1	17.9	93.4
Total ¹ ...	64,369	34,213	21,379	55,592	61.6	38.4	86.5

Source: Ministry of Labour Gazette.

¹ Including certain other classes than those specified.

TABLE III.—EMPLOYMENT OF SEASONAL WORKERS IN HOLIDAY RESORTS

Seasonal Variations in Unemployment

TABLE III.—EMPLOYMENT OF SEASONAL WORKERS IN 1930 AND 1933

	(a) 1930 Enquiry (Unemployed in Jan 1931)					(b) 1933 Sample Enquiry (Disallowed cases)				
	No of Cases	Average weeks worked in 1930 Season	No of workers with non-seasonal work in 1930	Average weeks worked out of season by those who obtained work	No of Cases in sample	Average Duration of Season in mths days	% draw-ing benefit or trans-fer of pay-ments in season in 1933	Average No of days of T.V. drawn by those re-ceiving payment		
<i>Males:</i>										
Hotel and Boarding House	680	20	135	11	217	4 12	53.0	47		
Sports and Games	148	19	34	11	430	6 3	47.2	33		
Amusements and Entertainments	—	—	—	—	176	4 19	51.1	31		
Road Transport	236	20	60	9	106	4 13	43.4	40		
Attendants	—	—	—	—	64	4 15	65.6	51		
Waiters	—	—	—	—	33	4 8	54.5	29		
Shop Assistants	—	—	—	—	88	4 20	30.7	23		
Seamen, Stewards, Yachtsmen, etc.	286	22	68	9						
<i>Females:</i>										
Hotel and Boarding House	3,212	19	773	11	527	4 17	41.0	37		
Waitresses	—	—	—	—	411	4 17	42.3	34		
Shop Assistants	476	19	101	10	169	4 12	32.5	28		
Attendants	—	—	—	—	108	4 19	25.0	25		
Cashiers	—	—	—	—	50	4 9	34.0	24		
Clerks	—	—	—	—	20	5 8	50.0	25		

Source: Ministry of Labour Gazette, August, 1931 and February, 1931

TABLE IV.—EMPLOYMENT OF OTHER SEASONAL WORKERS

	(a) 1930 Enquiry (Unemployed in Off-Season ¹)				(b) 1933 Sample Enquiry (Disallowed cases)			
	No. of Cases	Average weeks worked in 1930 Season	No. getting non-seasonal work in 1930	Average weeks worked out of season by those who obtained work	No. of Cases	Average Duration of Season in mths. days	% drawing benefit or transitional payments in season in 1933	Average No. of days U.B. or T.P. drawn by those receiving payment
<i>Males :</i>								
Maltsters ...	580	29	120	12	—	—	—	—
Salmon Fishers ...	379	26	218	7	123	6 19	28.5	66
Fish workers ...	271	16	100	10	38	4 9	81.6	44
Ice cream vendors ...	211	20	54	8	430	6 3	47.2	33
<i>Females :</i>								
Fish workers ...	1975	17	150	14	162	4 9	74.7	41
Kipperers ...	—	—	—	—	17	4 10	94.1	58
Jam & Preserve workers ...	851	16	103	15	135	4 5	41.5	34

Source : *Ministry of Labour Gazette, August, 1931 and February, 1934*

¹ This enquiry referred to seasonal workers unemployed (a) in September, 1930, and (b) in January, 1931. In each occupation the figures relating to the date with the largest number of unemployed has been chosen, in order to isolate workers unemployed in the off-season.

CHAPTER IX

AGRICULTURAL OCCUPATIONS

I. CLASSES OF AGRICULTURAL WORKERS

No continuous records are available to help us in tracing the seasonal fluctuations in agricultural employment. All we can do is to give the numbers employed at certain dates, to make a rough guess at the extent of unemployment at a certain date, and to describe broadly the pattern of seasonal variation and the methods by which the labour market is organized.

It is necessary first, however, to distinguish the three chief classes into which wage-earners on the land may be divided. This classification is based largely on the degree of regularity of employment and the three groups, as will be seen, are liable in different degrees to unemployment. The first group consists of *regular workers* whose employment as a general rule is quite regular and as nearly permanent as possible. The exceptions to the general rule are, however, becoming more and more important. The normal length of contract with regular workers varies in different parts of the country: in the South and East of England employment is generally by the week; in Scotland, and in parts of the North and West of England and Wales, on the other hand, the nominal period of employment is commonly six months or a year, but even here the contract is frequently terminable by either party at a week's notice. The Hiring Fair, taking place once or twice a year, when farmers and

labourers assemble in the market town to find new workers or new places, is still the usual method of making new contracts in the North of England and even as far south as parts of North Lincolnshire. But the relative importance of this method of engaging labour is rapidly diminishing. The second group consists of *casual workers*, but the name covers a variety of persons. At one end are highly skilled workers such as the thatcher, who is really a subcontractor working on his own account. At the other end are tramps who pick up such unskilled casual work as they can find. Some casual workers—and not only the skilled specialists—find employment quite regularly, but from a succession of different employers. Others work only in agriculture but are liable to considerable periods of complete unemployment. Others, again, alternate agricultural employment with work such as navvying on the roads.

The third group of workers are the *temporary seasonal workers*, who are engaged in agriculture only during the season when the particular kind of work they do is available. In this class come fruit, pea and hop pickers, potato lifters and many sugar beet workers (in the field and factory). Many of them are employed in other industries altogether at other times of the year, such as the hop pickers in Kent, largely recruited from the East End of London. Others are not occupied at all for the rest of the year. But this group overlaps to some extent with the second class, for a certain number of casual workers are seasonal workers who follow the season from place to place, for example, from the hop-fields of Kent to the strawberry districts of Hampshire and the market gardens of Evesham.

The Ministry of Agriculture collects statistics of the

numbers employed every year on one day in June. These figures separate regular from casual workers, but no distinction is drawn between the casual workers and the temporary seasonal workers in the third group that we have distinguished. Thus all the temporary workers actually employed on the particular day in June will be included among casual workers in the Ministry's figures. The number of these seasonal workers employed in June would be very small, so that the total is short of the maximum number of persons employed in agriculture during the year. These figures¹ show that the total number of agricultural workers in Great Britain was falling almost consistently from 1924 to 1932; in 1933 there was an increase for the first time in eight years but in 1934 the number fell again to a lower total than had ever been recorded before. The actual number in June, 1934, was 799,800. It is important, too, that the proportion of casual workers in the total was falling from 1924 to 1931 but rose from 13.9% in 1931 to 16.0% in 1934.

Although no information is available relating to seasonal variations in agricultural employment, it is possible to make some estimate of the average amount of unemployment. According to the Census of 1931 the percentage of unemployed wage-earners between 14 and 65 in agriculture (including horticulture) in Great Britain was 6.7%. Since the Census was taken at the end of April, almost no temporary seasonal workers would at that time be engaged and the percentage refers only to persons permanently employed in agriculture. It is probable, however, that a good many casual workers temporarily out of work would not register themselves in the Census as unemployed

¹ See *Ministry of Labour Gazette*.

and the proportion is certainly too low for that reason. The Unemployment Insurance Statutory Committee on the basis of the Census and other evidence came to the conclusion that an average unemployment rate of $7\frac{1}{2}\%$ should be allowed for in framing a scheme for insurance against unemployment of agricultural workers.¹

2. THE SEASONAL PATTERN OF AGRICULTURAL EMPLOYMENT

More than in any other industry, the seasonal fluctuations in agriculture are due simply to physical causes, to the operation of natural forces. But even in agriculture the extent to which these seasonal variations of nature are reflected in seasonal variations in the demand for labour is governed by the organization of the industry and of the market. Fruit and vegetables, for example, must be picked and sold within a certain period, but day to day fluctuations in sales and in the numbers employed in picking will depend very largely on price fluctuations on the market.

Agricultural operations may be divided into four classes :²

- i. First comes work which can be successfully done only within narrow limits of time, and which may

¹ *Report of Unemployment Insurance Statutory Committee (1935)*. The proposed scheme for insurance of agricultural workers excepts temporary seasonal workers (unless already insured by virtue of a non-seasonal occupation), persons employed by members of their own families, piece-work contractors, migratory labourers and private gardeners. The scheme also includes a provision to encourage long contracts; a reduction of 25% in the contribution is proposed on a yearly hiring, a reduction of $12\frac{1}{2}\%$ on a six-monthly hiring.

² of, J. A. S. Watson and J. A. More. *The Science and Practice of British Farming* (1928).

depend, too, on the weather within those limits. Such operations as haymaking, the cereal harvest, potato raising, the *singling* of roots and fruit and vegetable picking are included in this group.

2. Next comes work which is limited only to certain approximate times of the year, such as winter ploughing.
3. Next come operations which make a regular daily routine throughout the year. Milking and most work in connection with livestock are covered by this group. Even here, however, there is a certain fluctuation since there is slightly more work in the winter, when cattle are indoors and the sheds have to be cleaned regularly, and on sheep farms in the lambing season. At harvest time, too, work on livestock will be cut down to a minimum and as many men as possible sent to the fields.
4. Lastly, there are a great many operations which can be done at any time of year, such as general upkeep of the farm and buildings, roadmending, hedging and ditching and most kinds of "odd work." This class represents a considerable proportion of total farm activities.

It is evident that seasonal fluctuations in activity and employment on a particular farm, or in a particular district, will depend on the way in which the operations carried on there are divided under the four heads above. Thus in districts devoted principally to grassland farming seasonal fluctuations will not be of great importance; in arable areas, on the other hand, there are *very considerable variations from month to month* in the numbers employed and, consequently, a certain

amount of seasonal unemployment. On any particular farm in an arable area, the demand for labour will be most irregular if the proportion of the farm devoted to any single crop is high. The more specialized the farm, the greater is likely to be the seasonal variation. Since the proportion of labour cost in farming is high,¹ the farmer will naturally seek to employ his men profitably all the time and to cut down "time filling" work to a minimum. Other things being equal, he will mix his activities so that seasonal operations dovetail into each other and the total number of men required varies as little as possible. But "other things" are by no means always equal and the seasonal distribution of labour is only one of many factors to be considered. Thus an important school of agricultural economists favour an increase in specialization in British farming and a reduction in the number of mixed farms. Such a tendency would almost certainly increase the seasonal variations in employment, for workers are unlikely to move freely from one specialized district to another, or even from one farm to another, as the seasons change. Yet more specialization, even though it results in more seasonal unemployment, may very well be desirable for general economic reasons.

There has been a striking change in the nature of the seasonal fluctuations in agricultural labour demand during the last generation. Previously, the demand for extra labour came mainly at the time of the cereal harvest. To-day, with the development of new technical methods, the cereal harvest is gathered largely by the regular workers without extra help. Instead, however,

¹ The cost of labour in agriculture is estimated to be nearly 60% of the net output. See Carslaw and Graves, *The Labour Bill and Output on Arable Farms*. *Jnl. of Roy. Statistical Society*, 1935, Pt. IV.

the development of such agricultural products as fruit, peas, sugar beet and the like, has meant a new demand for temporary seasonal labour at least as large as the old.

This change in the nature of seasonal fluctuations has probably been accompanied by an increase in the irregularity of farmers' demand for labour. The harvesting of cereal crops depends mainly on weather conditions. The demand for labour to pick fruit, peas, potatoes and the like fluctuates from day to day not only according to weather conditions but also according to market prices. A slight rise in prices is likely to produce a sudden increase in the demand for labour and very possibly a glut of the product, and a sudden collapse in employment. These violent harvest term fluctuations in prices are very conspicuous to a market for seasonal products and naturally reach the fields. The case for organized co-operation. Lastly, the market, indeed, has as one of its strong points can be done, to smooth out short period fluctuations. The upkeep of the remains to be seen whether the present hedging and betting has this result; if so, they will work. This is a considerable stabilization over short period proportion of total labour.

It is evident that seasonal variations in labour requirements are even for work on the same crop in different parts of the country to another. In a district, will depend on the weather, to trace the course of activity carried on there are diverse extremely important district. Thus in districts devoted to fruit growing is the general rule—the farming seasonal fluctuations. The importance; in arable areas the marketing scheme is that the curers have been engaged to the factories throughout the year. are very considerable variations in the numbers employed, were not running to capacity during much

Eastern Counties. A study of seasonal changes in activity on twelve typical farms in this area has been made by W. H. Kirkpatrick for the University of Cambridge Department of Agriculture.¹ The demand for labour is at its lowest in January when a minimum amount of work is being done on crops. During the spring the work increases with the sowing of spring cereals, and the preliminary cultivation for, and sowing of roots. In June and early July, when the singling and hoeing of root crops are in full swing employment is near the peak and many extra casual workers are engaged. From mid-July, employment falls off and by the end of the casual workers are dismissed. By August, however, harvesting begins and lasts till towards the end of September. At the end of August the peak of employment for the whole year is reached, and the demand for extra labour is considerable. In the autumn employment is still fairly high, as the harvesting of potatoes and sugar beet is carried out, and preliminary cultivations and drilling of winter cereals must be done.

Table I, based on W. H. Kirkpatrick's work, shows the extent of concentration of labour in operations on the principal crops. The unit of measurement is the man-hour, but it is not necessarily the case that every increase in man-hours of labour required means the employment of more workers. Overtime is common enough and the normal weekly hours are generally two hours more in summer than in winter. It will be seen that for most products there are two busy seasons, one during the preliminary cultivation and planting, the other, generally the busiest, during the harvest. Thus in the case of potatoes the busiest fortnight of the time

¹ *The Seasonal Distribution of Farm Labour Requirements.*

TABLE I.—CONCENTRATION OF LABOUR IN CHIEF SEASONAL OPERATIONS ON TWELVE TYPICAL CAMBRIDGESHIRE FARMS

	Total labour requirements in year per 10 acres of crop	Man-hours	Approximate Maximum No of man-hours per 10 acres spent in any fortnight on		% of Total labour requirements of year used in peak season
			Planting, Preliminary Cultivations	Harvesting	
Sugar beet	2095	220	230	31% in 6 central weeks of harvest
Potatoes	1802	165	305	37% in 4 do.
Mangels	1614	157	228	14% in 2 do.
Winter beans	608	77	75	30% in 8 do.
Spring oats	435	37	74	42% in 6 do.
Spring barley	410	24	63	39% in 8 do.
Wheat	342	31	77	45% in 6 do.
Winter oats	309	49	60	53% in 8 do.
Hay making	194	0	60	73% in 6 do.

Table adapted from W. H. Kirkpatrick. *The Seasonal Distribution of Farm Labour Requirements.*

TABLE II.—PERIODS OF SEASONAL PRESSURE IN CERTAIN AGRICULTURAL OPERATIONS

	Planting, Preliminary Cultivation, etc.	Harvesting
Spring oats	December to mid-March	August to mid-September
Spring barley	January to May	August and September
Wheat	September to mid-December	August to mid-September
Winter oats	mid-September to November	end July to mid-September
Hay	—	end May to August*
Sugar beet	<i>Planting</i> , all winter <i>Hoeing and Singling*</i> mid-May to July	mid-September to mid-December*
Potatoes	March and April*	mid-August to October*
Mangels	mid-April to mid-August	September to mid-November*
Carrots and turnips		November and December*
Peas	March and April	June to September*
Winter beans	mid-March to May (Spring) October to mid-November (autumn)	August to end September*
Soft Fruit		June and July*
Apples	All year—but more in winter	October and November*
Tomatoes	—	June*
Celery	—	June*
Bulbs	—	(Picking and Sorting)* April and May

Note.—Operations demanding any appreciable number of temporary workers marked*.

in which the preliminary work was being done accounted for 165, or over 9%, of the total of 1802 man-hours spent on potatoes during the year, and the basic fortnight of the harvest accounted for 17%.

Table II shows the periods of greatest activity for more comprehensive list of agricultural commodities. The dates given apply roughly to the greater part of England, but naturally they tend to be rather late for the South and early for the North. The processes which demand any appreciable number of extra temporary or casual workers are starred. It will be seen that except for hoeing and singling of sugar beet and setting of potatoes the extra labour is required only for the harvesting or picking operations. The seasons of extra labour demand are therefore concentrated mainly on August and September.

A certain amount of factory work is associated with some of these products, namely in the manufacture of sugar in making jam and in canning soft fruit, peas and beans. Generally speaking, the factory work goes on simultaneously with the harvesting or picking, but tends to last a little longer. Thus sugar beet factories provide a certain amount of winter work. This is important in Great Britain because forestry, which in many countries acts as an outlet for agricultural labour in winter, does not employ very much labour here. Many of the factories manufacture more than one product in order to utilize their plant to some extent during the off-season. Thus sugar beet companies have in many cases added molasses and refining of imported sugar to their output,¹ while jam and canning

¹ Yet the average number of days worked at sugar beet factories was only in 1932-33 and 64 in 1931-32. *Journal of Ministry of Agriculture*, September, 1933, p. 557.

factories also make such alternative products as jellies and sauces ; some jam factories, by adding to their products, have completely stabilized employment throughout the years. In most cases, however, off-season production makes use of only a small proportion of total capacity.

3. THE RECRUITMENT OF TEMPORARY SEASONAL LABOUR

The organization of temporary seasonal workers in agriculture presents problems of some difficulty. For the lifting of sugar beet and potatoes, mangels and turnips, for haymaking, for the gathering of hops, peas, beans, tomatoes and fruit, especially soft fruit—raspberries and strawberries—for the picking and sorting of bulbs and for work on a few other products, a far greater number of workers is required than the normal agricultural labour force can provide. The demand, moreover, is, as we have seen, concentrated on the summer and spring months. This feature of agricultural employment is, indeed, common to all countries. In many parts of the world seasonal migrations take place from one country to another ; Italians and Spaniards flock into France and Poles into Germany for the harvest months.

Hitherto the general method of recruiting extra labour at the time of seasonal pressure has been to engage workers in gangs, each gang being directed, and, as a rule, paid by the gang-master or ganger. Originally, indeed, the gang system was used not only for the special temporary jobs listed above but for a great deal of ordinary agricultural labour. It was regarded as a more economical method of engaging labour than the maintenance of more than a minimum of regular

workers. The abuses of this system were notorious and led, as long ago as 1867, to the passing of the Gangs Act providing for the licensing of gang-masters and for the exclusion from gangs of children under the age of eight. The ganger is a subcontractor who not only gets together a group of workers but often contracts for the carrying out of a particular job—say the lifting of potatoes from a given field—at a fixed price. The farmer is not concerned with the selection of workers so long as the job is done as required. Another method sometimes used, especially in pea-pulling, is the “open field” system. The farmer puts up a notice announcing that a particular field is to be pulled on a certain date and all who care to do the work can go to the field and receive a piece-rate wage.

The temporary seasonal workers are drawn from a variety of sources. The majority of pea pullers and fruit pickers are women, and a considerable number of children work in the former occupation. Potato lifters and beet sugar workers are mainly men. Unemployed casual agricultural workers do a great deal of the work, while many women in rural areas not normally working for wages, and schoolchildren, work every year in the fields for the few weeks of seasonal pressure. In many cases miners, railway workers and others who live within easy reach of farms engage in potato lifting in the evenings after working during the day in their normal occupations. There are, too, the vagrant labourers, including gypsies, and the immigrant Irishmen who come over every year, some alone and some in gangs, and who wander all over the country prepared to work wherever casual temporary jobs are available.

Though the majority of seasonal workers in all occupations, except hop-picking, live within daily

reach of the work, mass migrations take place every year from East London to the Kent and other hopfields and from London and Sheffield to the eastern fruit districts. The hop-pickers go in family groups, men, women and children, and are accommodated in great encampments of huts and tents. The fruit pickers, on the other hand, are mostly women and girls. Usually from sixteen to thirty are employed by each farmer and the workers live in barns on the farm. The majority of hop pickers probably go to the hop-fields every year quite regularly and, according to some accounts,¹ regard the expedition partly as a holiday. The fruit pickers coming from London and Sheffield, on the other hand, are mostly women who only go occasionally when without jobs in their ordinary occupations. An analysis made by the Ministry of Labour in Sheffield showed that of the women who went from there to the fruit districts in 1934, 80% were unemployed at the time and not regularly seasonal workers; 15% were unskilled or domestic workers who went fruit picking every year; 5% were normally without gainful occupation but went fruit picking regularly for the season. According to another Ministry of Labour enquiry,² only about 16% of women engaged seasonally in fruit picking found work during the off-season. The corresponding proportion for male sugar beet workers was as high as 52%.

Apart from hop and fruit picking (and the former is on the margin of "agricultural" occupations) not many urban industrial male workers take up temporary agricultural work. Efforts have been made to persuade

¹ *New London Survey*, Vol. III, p. 331.

² The enquiry referred to seasonal agricultural workers unemployed in January, 1930. *Ministry of Labour Gazette*. August, 1931, p. 292.

unemployed men to do seasonal work on the land but it seems that considerable reluctance has been met due to the fear of workers in insurable trades that they will lose their right to benefit if they take up, even temporarily, uninsured occupations.¹

The organization of seasonal labour requirements has in the past been left to individual farmers and workers, with the gangers, very often, as intermediaries. There is no doubt that the result has been a considerable amount of waste of labour resources, of inefficient organization, of simultaneous local shortages and surpluses of labour, and of abuses of the gang system. Workers are often required at very short notice to take advantage of weather conditions or of price movements, and it is obvious that rapid movements of workers from place to place—despite modern transport facilities—are unlikely to be carried out successfully without any central organization for spreading information and linking up available workers with vacant jobs. Moreover there is generally a certain amount of opposition from ordinary agricultural workers, and from other rural inhabitants who might take seasonal work in agriculture to working in gangs; they generally prefer individual employment at day-wages. Consequently the tendency has been for farmers in many districts to employ organized groups of Irish migrants instead of local labour. The migrant workers sometimes, though not always, expect lower wages than ordinary agricultural workers; they are generally willing to cut the price when faced with competition.

¹ The position in fact is that a man whose only employment in several years was agricultural work might cease to be regarded as "normally" in an insured occupation. But if spells of insurable work intervened he would be in no danger of exclusion from insurance.

During the last ten years the Ministry of Labour has made considerable and successful efforts to extend its placing activities to the exceptionally difficult field of temporary agricultural occupations. The main obstacles have been the absence of machinery, in the form of employment exchanges, in many rural areas, and the reluctance on the part of employers (and to a less degree of workers) to adopt a new system of engagement.

To surmount the first obstacle, temporary "out-houses" have often been set up in villages remote from exchanges. To meet the objections to a new system—which arise partly from the convenience to the farmer of the old but partly from sheer conservatism—the exchanges have taken upon themselves many of the functions of the ganger. The employer states the number of workers he is likely to require and the date when they will be wanted: the exchange selects a group of workers and sees that they arrive on the field when needed. Very often, especially in pea-pulling, the farmer will only give his order late in the evening, when he has seen the condition of his crop and knows the probable market price; in such circumstances it is clear that only comprehensive and efficient machinery can organize the available labour supply to the best advantage. The methods used where exchanges are not active are generally haphazard and casual, and result in the waste of human and material resources. The objections of the workers to gang organization seem to be less—though they still persist in some cases—when the gangs are organized by the exchange instead of by a ganger. In spite of the fact that a central organization can only be at its most effective when the whole labour market is brought under its

control, employment exchanges have never succeeded in any area in covering the whole field. Thus it is reported from an important pea growing area that "determined efforts were made by the local exchange manager to secure the adoption of a scheme for organizing the supply of labour for pea-pulling. The scheme, which provided for the registration of all workers according to the estimated requirements of farmers, was framed with the particular object of preventing a recurrence of incidents which took place in the 1931 season when large numbers of workpeople in search of employment stormed the fields and did considerable damage to the crops. Although supported by the Local Employment Committee, the manager's proposals were not acceptable to some growers, who preferred not to depart from traditional methods of engaging labour."

TABLE III—WORKERS PLACED IN AGRICULTURE BY EMPLOYMENT EXCHANGES IN GREAT BRITAIN. 1929-33

	ADULTS		JUVENILES		Gardeners and Gardeners' labourers (excluded from previous cols)	Total
	Men	Women	Boys	Girls		
1933	32,093	32,259	4,283	3,725	6,160	78,520
1932	24,934	8,637	6,300		6,168	46,139
1931	25,672		1,600		5,693	32,965
1930	27,803				6,543	34,346
1929	30,074					

Source: Ministry of Labour Gazette.

The number of workers placed by the exchanges in agriculture rose from 34,000 in 1929 to over

78,000 in 1933.¹ This total covers gardeners and gardener's labourers, included under Agriculture by the Ministry of Labour's classification but not in the ordinary sense agricultural workers. The number of gardeners is, however, given separately. The great majority of the Ministry's placings are of temporary seasonal workers; the exchanges have hitherto been able to take only a very small part in placing work among regular or casual agricultural labourers. Efforts are being made in this direction, however, and officials of the Ministry now regularly attend some of the important Hiring Fairs, when they register workers and put them in touch with such vacancies as farmers notify to them.

It is impossible to say what percentage of seasonal workers are placed by the exchanges, but the 78,000 placings in 1933 must represent a considerable proportion of the total. The total number of seasonal workers is not only unknown, but it varies appreciably from year to year. If a crop is poor, or if owing to weather conditions the picking or harvesting operations can be spread over a long period, a larger part of the work will be done by ordinary (probably "casual") agricultural labourers and temporary workers will not be called upon.

Separate statistics are available for the principal occupations—pea-pulling, beet sugar² and fruit-picking. Pea-pulling accounted for 40,350 placings (over half the total) in 1933 and about 13,000 in 1932; beet sugar placings were 13,746 in 1933 and 10,368 in 1932; fruit-picking represented 4,579 placings in 1933 and about 4,000 in 1932.

¹ See Table III. Hop picking is not included in these figures.

² Field work only is included in these statistics.

The beet sugar industry deserves separate examination. Placings are made by the employment exchanges both in field work (where temporary labour is required in May to July for hoeing and singling and in September to December for lifting and topping) and in factory work (which is carried on about the same time as the lifting and topping though it sometimes goes on longer), and the total number placed in both branches rose from 6,600 in 1929 to 13,700 in 1933.¹ Owing to the new development of the beet industry it has been easier for the employment exchanges to carry on placing work than in other branches of agriculture; the exchanges have not had to cope here with the obstacle of a conservatism clinging to old established customs.

The field workers on beet sugar are in most cases recruited from local sources and a considerable proportion, estimated at 40% in 1931,² are normally casual agricultural labourers. For factory work, on the other hand, an appreciable number of workers are brought by the exchanges from other districts, generally from towns. The proportion of persons placed in factories who came from other districts was 11% in 1931 and 12% in 1932.

It is possible to make a rough estimate of the proportion of the total engagements in beet sugar for which the exchanges are responsible.³ The proportion is very much higher in factory work than in the fields.

Another branch of the Ministry's agricultural work worth special mention consists in the temporary transfer of hundreds of workers from England to Jersey

¹ See *Ministry of Labour Gazette*

² *Ibid.* June, 1931, p. 214.

³ See Table IV. But the total placings include a certain number of replacements of workers who take more than one job during the course of the season.

for the potato and tomato seasons. The Jersey potato season starts in early May and continues till July. The tomato crop, of much less importance, is picked in July. Until 1932 Breton workers regularly went over to Jersey for the season, as the local labour on the island is only sufficient to do a very small proportion of the work. At the end of 1931, however, negotiations were opened between the Ministry of Labour and the Jersey authorities with a view to English workers being engaged in place of Bretons. In early 1932 a representative of the Jersey Farmers' Union, accompanied by Ministry of Labour officials, visited a large number of exchanges in South West England and engaged workers, signing contracts then and there, for work in Jersey later in the year. It is said that the response to the call for workers was good and eventually 2,600 men and seven women, organized in small gangs, went to Jersey. The same thing has been done every year since 1932 and the experiment appears to have proved highly successful.

TABLE IV.—COMPARISON OF EMPLOYMENT EXCHANGE PLACINGS WITH ESTIMATED TOTAL WORKERS IN BEET SUGAR

	Estimated total workers		Employment Exchange Placings	
	Field Work	Factories	Field Work	Factories
1929	23,000	8,889	3,282	3,302
1930	35,000	9,900	5,923	4,207
1931	—	7,900	3,407	5,709
1932	—	8,100	3,367	7,001

Source : *Ministry of Labour Gazette*, June, 1931, and *Journal of Ministry of Agriculture*, September, 1933, p. 557.

Though the work is described as arduous, and hours are long, there seems no doubt that the Jersey farmers found the English workers as satisfactory as the Bretons, and it is likely that in the future only English workers will be employed. Throughout the Ministry of Labour has supervised the transfer and officials were stationed on the island to deal with disputes.

The achievements of the employment exchanges in agriculture may, to sum up, be classed under three heads. In the first place they have succeeded to a large extent in their aim of substituting local labour for migrants. Secondly, where any considerable number of workers transfer temporarily from an urban to a rural area, they have organized the movement by co-operation between the urban and agricultural exchanges. Third, the actual methods of engagement in the fields, whether of local labour or of transferred workers, have been much improved, both from the farmers' and workers' points of view, by the intervention of the exchanges.

CHAPTER X

CONCLUSIONS

I. RECAPITULATION

THE statistical analysis of Chapter II showed that about three-quarters of insured workers and many workers outside the unemployment insurance system are attached to industries subject to regular seasonal variation. The total number of insured workers who some time during the year become unemployed on account of these fluctuations varies from about six to eight hundred thousand, or from 5% to 7% of the insured population. The *average* number seasonally unemployed during the year is, however, about 230,000 to 300,000 or 2% to 2½% of those insured.¹ Both these proportions tend towards the higher end of the range in years of high general unemployment, for it has been shown that seasonal fluctuations tend to increase in amplitude during depressions. Although seasonal fluctuations are less in Great Britain than in most countries, yet they account for between one-tenth and one-fifth of total unemployment. Seasonal fluctuation, then, presents an unemployment problem large enough, and widespread enough, for some concerted efforts towards a solution to be well worth while.

Before considering the directions in which a solution might be—and is being—sought, it may be useful to recapitulate some of the principal aspects of the problem brought out by the detailed studies of particular industries.

¹ See p. 19.

The original cause of seasonal variations can, we have seen, be traced in most cases to natural phenomena. But these natural phenomena—chiefly the seasonal variation in climatic conditions—do not necessarily and inevitably produce seasonal variations in production and employment. The natural factors do in practice lead to seasonal variations in demand but it is possible, as we have found, to dissociate to some extent the seasonal pattern of demand from the natural factors responsible for it. Seasonal demand, again, need not always cause seasonal production or employment. Much depends on the organization of the industry or on the nature of the product. Many seasonal industries, such as the clothing and motor industries, make a large variety of products which are so susceptible to the influence of fashion that production ahead of orders is unsafe and variations in supply and demand must keep in step. This variety of production, and the importance of fashion changes, are partly due to the character of demand but may in large part be regarded as results of the organization and policy of the industries.

It has been found, too, that in most seasonal industries there are some firms which are much more stable than others and some which have succeeded in almost completely eliminating seasonal fluctuation. In some cases, this stability is due to the firm in question being engaged in a section of the industry where fluctuations are less than the average; in most seasonal industries the amplitude of seasonal fluctuations in demand differs for the different classes of products made. In other cases, stability is secured by deliberate policy, for example by anticipating demand and carrying heavy stocks, by securing orders exceptionally early, by publicity, or by dovetailing products with different sea-

sonal patterns of demand. In general, though not always necessarily, large firms are better able to reach stability by these means than small units ; in most industries—certainly in clothing, motors and building—the large firms are the more stable, though not every large firm makes use of the opportunities of securing stability and many small firms are able to surmount the disadvantages of their size. In these ways industrial organization is always in the foreground as a principal element in any picture of seasonal variation.

2. THE PROSPECTS OF STABILIZATION

To the important question whether seasonal fluctuations are tending to become more or less significant, we were able to give only a rather indefinite reply. It appears that since the relative importance of some of the most seasonal industries is tending to diminish, the significance of the seasonal element is on the whole becoming less (apart from the exceptional circumstances of the depression years 1930-1932). The study of individual industries provides further indications of the probable future trend of seasonal fluctuations. We may sum up briefly the industrial tendencies which are making for an increase and those making for a decrease in seasonal fluctuation.

Among the factors making for increased seasonal fluctuation, the growth of " fashion " demand can be put first. Where fashion plays an important part in the market, any seasonal fluctuations in demand are bound to be reflected in production and employment, since stock holding becomes dangerous if not impossible. A rising standard of life and falling costs of production are likely to lead to an increased demand for

goods affected by the play of fashion ; more customers will insist on appearance and style, fewer on solidity and long life in the articles they buy. Technical development, by reducing the costs of fashion goods, brings them within the range of the lower-paid workers, and tends in this way to increase seasonal fluctuation. Secondly, there is a general tendency towards hand-to-mouth business which accentuates seasonal and irregular fluctuations. This tendency is due, it seems, partly to improved transport and productive organization, rendering it unnecessary to make stocks and easy to fill orders rapidly, and partly to the decline of the wholesaler who is frequently responsible for the carrying of stocks and who acts as a kind of buffer between manufacturer and retailer. Thirdly, mass-production methods and specialization of machinery have been accompanied by specialization of labour. Workers trained to a single process cannot change from job to job with fluctuations in the demand for their specialized work. Fourthly, the organization of the employment exchanges undoubtedly facilitates seasonal methods of operation since the potential supply of labour available to meet fluctuations in the demand for it is greatly enlarged.

On the other side of the balance sheet, among factors making for diminishing seasonal fluctuation, we may put first the general tendency towards an increase in the scale of production. The larger concerns can more easily even out fluctuations in employment. Yet though this general tendency no doubt exists, it operates very slowly ; in the building and clothing industries in particular, the small firm still holds its own. The tendency to an increase in the scale of production is partly due to technical progress increasing the amount

of capital required to enter production. Thus, technical progress has a double effect on seasonal fluctuation : in so far as it contributes to the extension of fashion demand it increases seasonal fluctuation ; in so far as it tends to increase the scale of production it works in the opposite direction.

Secondly, there is a certain tendency—not always developing very quickly—towards standardization of certain articles such as household fittings and motor components subject to seasonal demand. Standardization, by reducing the risks of making stocks, is on the whole a stabilizing factor. The movement towards standardization is another by-product of technical progress, since without standardization the full benefit of mass production cannot always be realized. Thirdly, while, as we have seen, the organization of the labour market through exchanges makes seasonal operation easy, at the same time it facilitates dovetailing between seasonal occupations. Fourthly, we must reckon among stabilizing tendencies the decline in the relative importance of some of the more seasonal industries which has the effect of reducing seasonal fluctuations in the system as a whole. This fact seems to have been in practice the most powerful. Indeed, the developments of productive technique and of industrial organization, with which the other tendencies mentioned can be directly associated, appear to have operated in both directions at once—in some ways accentuating, in others smoothing out seasonal irregularity. The net effect on seasonality has probably been negligible.

We have not mentioned among stabilizing tendencies the deliberate efforts to even out seasonal fluctuations as a matter of conscious policy. Undoubtedly, how-

ever, a scientific and far-seeing attitude in industrial planning is making itself felt ; stability and regularity in the operation of industry are to an increasing extent being regarded as desirable and not altogether unattainable objectives.

There seem to be good reasons for regarding seasonal irregularity as an element in the industrial system which on the one hand raises costs and on the other leads to insecurity and uncertainty of livelihood among workers. It has been shown that although seasonal fluctuations are ultimately due in most cases to natural factors, yet the immediate causes are to be found largely in the buying habits of consumers and in the organization of industry. Although buying habits and industrial organization must not be regarded as easily alterable—indeed they may be more difficult to attack than natural and technical factors—yet the surveys made of particular seasonal industries show that efforts, in some cases successful, are already being made to reduce seasonal fluctuations. The example of the United States may be quoted. Considerable uneasiness was felt there, some twelve years ago, at the extent of seasonal fluctuations and of the unemployment to which they gave rise. This dissatisfaction was expressed in the Reports of the President's Conference on Unemployment, which came to the conclusion that seasonal fluctuation was very largely avoidable. Concentrated efforts were made in seasonal industries to increase stability and considerable success seems to have been achieved.¹

¹ According to the *Committee on Recent Economic Changes* (p. 524) by 1929, as the result of this campaign, definite measures to modify seasonal irregularity had been put into effect in 51% of a sample of investigated companies ; in 4% of the companies irregularity had increased ; in 5% nothing had been done ; in 40% the problem had never been acute.

There are three possible kinds of treatment for the problems of seasonal irregularity in employment. The first consists of measures which will reduce fluctuations in the demand for labour of seasonal industries. The second kind consists of measures such as dovetailing of occupations and improved organization of the labour market, which, while not affecting the seasonal operation of industry, will yet reduce the irregularity of employment and income of the individual workers engaged in seasonal industries. The third kind consists of the alleviation of what seasonal unemployment remains—for example, its distribution by the working of short time. In most cases there is a strong case for further progress in all these directions but each industry naturally has its own problems for the solution of which different methods may be appropriate.

It should be realized first that an essential condition of success is knowledge, and, especially, statistical knowledge. Stabilization requires a good deal of anticipation of future movements of the market. The extent of, and reasons for, seasonal demand, the regularity from year to year of seasonal pattern and amplitude of demand, production and employment, the differences in seasonality—often of great importance—between the different sections of the industry and the market, and between the various firms, must all be studied before any large-scale policy of stabilization can be successfully carried out. Among published statistics we may note particularly the absence of information relating to monthly production in any but a very few industries. At present, seasonal changes in production have to be deduced from the fluctuations in employment but, as we have pointed out, employment figures are not a completely accurate guide. There can be

little doubt that the existing periodical *Census of Production* would be improved by some information relating to monthly variations of production during the census year. Figures showing the total employed monthly are already included. Monthly production figures would be extremely difficult to collect but an alternative method would be to ask each establishment for its monthly wages bill. Information of this character would substantially assist industrial firms and public authorities to estimate the need for and possibilities of a stabilization policy and to decide what form such a policy should take.

3. METHOD OF REDUCING SEASONAL FLUCTUATIONS IN INDUSTRIAL ACTIVITY

The first class of remedy, the reduction of seasonal irregularity of operation, may be sought along three lines: the seasonal amplitude of demand may be altered by inducing customers to alter their buying practices; or production may be so organized that a seasonal demand is met by a regular supply. These two lines of approach are both for the most part the concern of firms themselves; they are matters of internal industrial and selling policy. The third method is the use of government or local authority intervention either through the market—for in many industries State agencies are themselves important customers—or by legislation which encourages or enforces regular operation.

We must consider first the possibility of reducing the seasonal amplitude of demand. Something may be done in this direction by properly directed propaganda. The industry, in fact, must get into touch with its

customers. We have seen already that painters, through the trade union and the Paint Marketing Council, have for some time issued regular propaganda in the hope of persuading the public to get more decoration and painting done in the autumn and winter.¹

A more successful example is that of a large manufacturer of radio apparatus, Murphy's Radio. This firm, whose publicity is of a distinctively "personal" character, not only appeals to the public to buy radios during the off-season, partly on philanthropic grounds² but also tries to secure this result by concentrating its advertising on the slack season. The firm has succeeded in stabilizing employment to a very considerable extent but the publicity policy is allied with a particular policy in the presentation of new models.³ It is impossible to disentangle the effects of the two factors. Where advertising is extensively used, its concentration on a particular season is likely to be effective. We have already seen that in the motor industry advertising tends to be concentrated on the busy season; the natural reaction to a seasonal demand is, indeed, to advertise when people are inclined to buy and are therefore most receptive. This procedure tends to increase the intensity of seasonal fluctuation. Advertising in the off-season, contrariwise, can very well be used to stimulate demand at that period if customers are susceptible to publicity. But in an industry like the

¹ See p. 195.

² See, for example, an advertisement headed "Unemployment" in the *Daily Herald*, May 25th, 1934. "If you buy now, instead of waiting for the autumn, you will not only have several more months of radio enjoyment, but you will also be keeping many hundreds of workers in our factories and in our dealers' shops fully employed during the next difficult months."

³ See p. 263.

radio industry one firm, by extensive off-season publicity, may, of course, stabilize its own production by attracting off-season demand from other firms and the seasonal amplitude of demand as a whole may not be affected. To stabilize demand as a whole to any considerable extent would probably require a concerted advertising policy in the whole industry.

In many seasonal industries such as building, painting and decoration, and in many sections of the clothing trades, the possibilities of publicity are clearly very limited since publicity is not extensively employed in the sale of their products and services. But some firms, such as tailors with well-known names and whose products could be classed as "proprietary articles" might find publicity an effective instrument of stabilization.

In this latter group of industries, propaganda through the ordinary publicity methods is not likely to have much result unless supplemented by a clearly defined seasonal price policy. The customers will hardly be persuaded to alter their buying habits by appeals to philanthropy alone or even by a bombardment of advertisement. But if customers can be brought to realize the advantage to themselves of regular demand there is some prospect of progress towards stability. These advantages may take the form of a better chance of rapid and competent attention (as, for example, in building or painting or the making of bespoke garments), or the industry may adopt a policy of lower prices in the off-season to stimulate demand.

Seasonal variations occur in the prices of several commodities, but it is important to distinguish the cause. Milk prices, for instance, are higher in winter

on account of the lower yield. Other foodstuffs, too, are sold at higher prices in winter on account of the reduced output. The price of most coals for internal consumption varies seasonally, being regularly from two to four shillings a ton lower in summer than in winter, but in this case the cause lies in the seasonal falling off of demand. If there is any seasonal variation in costs it is likely that coal is actually more expensive to produce in summer than in winter on account of high overhead costs. The variation therefore presents a deliberate attempt to increase off-season demand. In a competitive industry selling a standardized product, such as coal, the adoption of a policy of this kind by a few firms is likely to lead to its general adoption by the whole industry.

Seasonal price changes which have the effect of stabilizing demand are rare in Great Britain, though, perhaps, they are more common in the United States. It seems, however, that they might be extended to a good many products. But if they are to be effective it is essential that they should be brought before the public notice with as much emphasis as possible. Customs and habits, as has been observed already, are as difficult to surmount as technical obstacles.

Periodical Sales in retail shops are special cases of price variations adopted with a view to inducing stability of demand. Retailers have as much interest as other enterprises in reducing their overhead costs by stabilizing their activities. Thus the January and July sales are timed to coincide with periods when buying would otherwise tend to be slack—just after the Christmas season and during the holidays. It has, however, been found in some stores that the Sales tend to inten-

sify the slackness of activity in February and August. Consequently they have resorted during these months to stimulating selective demands, for example, by special "Household Sales" of all kinds of household equipment.

It must be noticed, however, that Sales do not consist entirely in the selling off at low prices of surplus stocks. In many cases special orders are given to manufacturers for production of exceptionally cheap lines. When, as often happens, these orders come in very shortly before delivery is required, the effect may be to increase the fluctuation in manufacturing employment.¹

Seasonal price variations could be applied not only in sales to the public by manufacturers or retailers but also in the sale of raw materials and semi-manufactured goods to manufacturers of the final product. Price movements of this kind should encourage the producers of the final product to make what efforts they can to stabilize their own sales, so that they may take advantage of lower off-season prices of the products they themselves purchase.

Akin to the policy of deliberate price variations to stabilize the market is the proposal that wage-rates might be subject to seasonal changes in order to encourage the stabilization of the demand for labour. The reaction to such a proposal on the part of trade unionists, is, however, generally unfavourable. Earnings are already lower in the slack season owing to short time and until the lower off-season rates actually have the effect of stabilization of demand for labour, they are likely to accelerate still further the irregularity of earnings. It is felt too that if a lower time or piece

¹ See p 125.

rate were allowed in the off-seasons, the workers would not easily be able to insist on a return to the higher rate in the good season.¹

The export market represents a special class of demand. In some industries it is possible partly to stabilize employment by the dovetailing of exports with production for the home market. The Austin Motor Company, for instance, uses exports as a stabilizing factor. The importing countries, however, have their own buying seasons and it is not always possible for a firm to pick and choose its customers so as to secure the ideal distribution. Before the war the seasonal pattern of coal exports used to compensate partly for variations in the home market. Since the war, however, the seasonal pattern of exports has changed. It still compensates partly for home sales—exports being low at the end and beginning of the year and rising in the spring—but the extent of compensation is much less marked.

It is clear that the methods of altering the pattern of consumers' demands described above will not completely do away with avoidable seasonality. We therefore pass on to those methods of stabilization which consist of planning production and employment so as to reduce their seasonal fluctuation without getting rid of the seasonal pattern of demand. The first and most obvious way is to produce independently of fluctuations of demand and to carry a varying stock of goods. Thus the demand for photographic apparatus is highly seasonal, being concentrated in the period Easter to

¹ Lower off-season rates have been established in some cases in the U.S.A. but trade union objection is generally strong and for much the same reasons as those suggested here. See Feldman, *Regularization of Employment*, pp. 144-5.

August, with a peak in June and July. At least one firm, the Kodak Company,¹ is able to prevent seasonal demand from exercising its full effect on production and employment by building up heavy stocks in winter and early spring. Another example is the Boots Pure Drug Company. The demand for certain of its products—for example certain medicines—is highly seasonal, but this company, as the result of a "rationalization" campaign, has succeeded in evening out the production of those commodities through a planned production programme.² The fact that the company controls its own distribution outlets is very important, though not, as the case of the manufacture of photographic apparatus shows, an essential condition of such a policy.

Certain obstacles to this policy are at once evident. There is first the cost of holding stocks; second the impossibility of forecasting future total demand; third the fact that even if future total demand can be estimated, a firm producing a variety of products—especially if subject to the forces of fashion—cannot know the distribution of that demand among the several classes or styles. Photographic apparatus and drugs, of which the production is regular despite variations in demand, are fairly standardized and not subject to rapid changes of design. It should be noticed, in this connection, that the two firms mentioned above, the Kodak Company and Boots, while not monopolies, are predominant in many sections of their markets. All these obstacles, it may be observed, are most serious for the small firm which can less readily borrow to carry

¹ See letter to *Economist*, Dec 1st, 1934, p. 1036.

² See *The Five Days' Week. An Investigation of the Boots Company.* By Sir R. Redmayne, p. 26.

stocks and can less accurately estimate the future demand for its products. The difficulties of making for stock are most serious in fashion trades, though even here most firms have a number of standard lines which can be made up in the off-season. These difficulties are increased, for example in the clothing industry, by the growing reluctance of wholesalers to bear the responsibility of holding stocks and by the tendency for more and more hand-to-mouth buying. In certain seasonal trades such as building, the advantages of regularity are generally regarded as less than the disadvantages of tying up capital in unsold products. In the motor industry, too, the product is exceptionally expensive to stock but the chief difficulty here seems to be the variety of makes.

This leads on to another condition of stability—increased standardization of products. The greater the variety of products and the more frequent the changes in design or style the more difficult it is to estimate in detail future demand. Competition often leads to the introduction of an increasing variety of products. Each manufacturer, particularly in trades subject to a fashion demand such as clothing, motors or radio, tries to establish his hold on the market by means of a unique design with which his name is associated and which will serve his publicity agents and salesmen as a good “talking point.” Where the possible range is large, and individual firms subject to considerable fluctuations in demand from year to year owing to fluctuations in public taste, every producer may try to protect himself against these fluctuations by catering for as many kinds of demand as possible. This is particularly true of the motor industry. The result is the introduction of a great variety of products, the

differences in design or quality being often of no real importance.

A reduction in variety must naturally reduce the consumers' range of choice. But the consumer is paying for his choice by higher prices, due in part to the technical factors increasing production costs when variety of designs increases, in part to the high overhead costs of the irregular operation rendered necessary by variety. It seems that there is a good *prima facie* case for the reduction of variety in many products. Some of the standardization or simplification work of the American Bureau of Standards, for instance, has undoubtedly reduced costs and can hardly have affected unfavourably the interests of consumers.¹

Especially useful and even more practicable is the standardization of parts and accessories of finished products where variety exists mainly because the manufacturers of the final product all require separate designs of the manufacturers of the parts or accessories.

Another aspect of this problem of variety of products, of particular importance in the motor and radio industries, is the time chosen to present new models to the public. In the motor industry the Olympia Show, at which the designs for the following year are disclosed, has the effect of stimulating sales in what would normally be a slack season, and thus of stabilizing production to a certain extent. The radio industry is not dissimilar from the motor industry in so far as there is a great variety and constant change of designs, due in part to technical progress and in part to fashion and competition.

¹ See *Recent Economic Changes*, Vol I, page 117. For example, the number of varieties of beds, springs and mattresses was reduced from 78 to 4, of milk bottles from 49 to 4, of face-bricks from 75 to 23, and of roofing slates from 98 to 48, etc.

The demand for radio apparatus is very seasonal, being concentrated principally on the autumn and winter months. New models are brought out every year at the Radio Exhibition held in August; the exhibition thus coincides with opening of the normal buying season and intensifies the seasonal fluctuation due to demand. Judging from the evidence of the licences sold, sales of radio apparatus to the public are less than half the monthly average in June and July and rise from August to a peak in December of about twice the monthly average, thereafter falling through the spring and summer. About two-thirds of the sales appear to take place in the six months September to February.¹

Production is probably somewhat more seasonal than the demand since the usual practice is for manufacturers and dealers to accumulate stocks of new models early in the busy season and to unload the stocks of old models during the summer. Consequently, orders to manufacturers may fall to very low levels indeed in June and July.

In order to reduce seasonal fluctuations, the Murphy Radio Company has adopted the policy of bringing out new sets not at the August Exhibition but in spring or summer when demand is usually slack. It is emphasized by the company that the new sets are not going to be superseded during the year. The effect of this policy, allied with a corresponding concentration of publicity, is a distinct increase of off-season sales. The

¹ Manufacture of radio apparatus is included by the Ministry of Labour in the Electric Cables, Apparatus, etc., industry. The seasonal fluctuation of employment in this industry is shown in App. III; the seasonal fluctuation in employment in radio manufacture alone is similar in pattern but of greater amplitude.

² See p. 255.

example of this manufacturer has been followed by one or two others, but a few firms may stimulate the off-season demand for their own products without affecting the seasonality of demand for the products of the industry as a whole. A policy of reducing fluctuation in demand by introducing new models in the slack season must probably be adopted by at least a majority of manufacturers (as in the motor industry) before it is to be effective.

Another method of increasing stability of operation is for the manufacturer to secure his orders well in advance of delivery dates. As we have seen, the tendency towards hand-to-mouth production makes this increasingly difficult. Probably, however, it would be possible for manufacturers to slow down this tendency by a concerted policy; in any case some firms, especially large and influential firms, could reduce their own seasonal fluctuation by insisting on earlier orders. Examples have been found in sections of the clothing trade.¹ Much depends on the salesmen, whose efforts in executing such a policy are obviously of the first importance, and there is something to be said for paying salesmen in such a way that they will gain from more regular sales, for example by special inducements to stimulate activity in the off-season.

This policy may be combined with some form of seasonal discounts or postponement of payment. Thus in the cycle industry manufacturers give delivery to merchants during the winter but payment is deferred till the selling season begins. In this way the manufacturer to a great extent finances the holding of stocks by the merchant.

A further method of diminishing fluctuation in em-

ployment is the dovetailing of two or more seasonal demands by producing more than one product. This is done extensively in the clothing industries and by certain firms making motor parts and accessories. An important radio manufacturer makes refrigerators in addition. Although this practice seems at first sight an obvious way of avoiding seasonal fluctuations, the difficulties of entering two completely different markets must not be under-estimated. Indeed the problem of marketing seems to be more important in such cases than the technical problems of production. The difficulties may, however, be reduced if the firm acts as a contractor in manufacturing the subsidiary product, not itself entering the market, but undertaking contract work for other firms who are principally engaged in making the product in question.¹

Again, there are technical developments which may make it possible to surmount the physical obstacles to regularity of production. In very few industries do physical factors actually prevent or impede, from a technical point of view, stabilization of activity.² These few industries are outdoor industries, notably building (including outdoor painting) and public works, and even here we have seen that in

¹ A rather special case of dovetailing of products is the use of a plant for more than one purpose. An example is the use of a Manchester refrigerating plant for a dairy in summer and an adjacent ice-rink in winter. This must considerably reduce the total cost of operation of the ice-rink. This is a minor way in which seasonality enters into the problem of industrial location. If convenient sites near dairies could always be found, ice-rinks, which only too often fail to prove profitable, might be less rare.

² In the gas industry, which used to be highly seasonal, the fluctuation has almost, though not completely, disappeared. One reason is the fact that technical developments have diminished very considerably the number of retort men required, this class of worker being the most subject to seasonal unemployment. See F. Popplewell in *Seasonal Trades*, ed. Webb and Freeman, p. 168.

certain kinds of work modern methods of construction have removed almost completely the disadvantages of work in bad weather.

Lastly there is in every plant a certain amount of repair and maintenance work which can always be postponed till the off-season. If the work can be done by semi-skilled or unskilled labour, and if production workers belonging to these classes would otherwise be discharged, postponement of repair work to the slack season may help to some extent towards regular work. This method is found very useful in agriculture where "odd work" which can be done at any season represents a considerable proportion of the activities of most farms.

We must turn now to the possibilities of Government action to stabilize seasonal industries. Discussion of Government policies to relieve seasonal unemployment when it occurs is reserved for the next section. We are concerned here with preventive rather than curative action.

The Government and local authorities can help stabilization through their position as important customers of certain seasonal industries. This method might be particularly effective in the building industry. Local authorities could place their housing contracts in such a way as to fill in the seasonal gap in activity left by the speculative builder and private contracts. Government departments, local authorities and other public bodies could concentrate as much as possible of their interior decoration in the autumn and winter. In sections of the clothing industry, too, Government departments, *local authorities and other large concerns* with uniformed staffs make up an important block of the market. Some already place their contracts during

the off-season but the practice could usefully be extended.

Again, there is the possibility of adjusting the unemployment insurance system in such a way as to encourage regularity of employment. It is often maintained that unemployment insurance tends to increase seasonality and irregularity of operation. Partly because workers dismissed will not be entirely without means, partly because an employment exchange system implies in most cases a large reserve of labour easily available at need, employers will care less about temporarily laying off their staffs. A monetary inducement might, however, be provided which would differentiate in favour of regular operation and thus stimulate employers to organize their activities so as to reduce, so far as possible, seasonal fluctuation. A clause framed to secure this result was indeed included in the original Unemployment Act of 1911.¹

Under this clause a refund of one-third of the contribution paid was made to any employer in respect of any worker employed by him continuously for twelve months. It was found, however, that the financial inducement was so small as to be ineffective; the amount of the refund was only 3s. 7d. a year in respect of each adult male worker. Moreover the administration was difficult and expensive and the net effect of the clause was an additional charge on the fund; this feature of the original scheme was abolished in 1920. It should be observed, however, that the employer's contribution was at that time only 2½d. a week; the amount of the refund, with the present weekly contribution rate of 10d. would be 14s. 5d. a year. The refund need not, however, be limited to one-third of

¹ National Insurance Act, 1911, Section 94 (i).

the contribution ; it might be raised as high as the total contribution paid ; this would give a maximum refund of 43s. 4d. a year for adult male workers. The corresponding refund for an adult female worker or a young man of eighteen to twenty would be 39s. and for a young women of eighteen to twenty, 34s. 8d. For unskilled men and for women these amounts are not much less than a week's wages ; it would evidently pay the employer to give one week's extra work to a worker who would otherwise be employed for only fifty-one weeks in the year. In itself, such a concession could make little difference. It must be remembered, however, that the refund is not the only gain from more regular employment and operation. In those industries where stabilization would mean lower costs it is possible that the direct financial incentive of a refund would stimulate employers to regularize their activity and thus secure the less obvious advantages of reduced costs.

Concessions of this kind have been tried in the United States. Unemployment insurance is there, of course, limited, except in the State of Wisconsin, to special schemes voluntarily adopted by individual firms or industries, but several such schemes exist, the most notable being those in certain centres of the clothing trade. Some of these include definite provisions for the partial refund of contributions in respect of workers regularly employed.¹

As presumptive evidence of the usefulness of this type of provision in insurance schemes, we may notice that the framers of the compulsory unemployment insurance system introduced in the State of Wisconsin

¹ For example, the insurance scheme (started in 1921) covering the ladies' garment industry in Cleveland.

in July, 1934, with the evidence of other American and British schemes before them, included a definite inducement to regularity. This system,¹ like earlier ones in the U.S.A., is based on the individual firm ; each firm maintains its own independent account and fund. The employer pays weekly 2% of the total wage bill of the employees covered by the scheme. If, however, a particular employer's fund arising from his contributions amounts to more than \$55 per employee, the contribution rate is reduced to 1%. If the fund amounts to more than \$75 per employee, contributions are altogether suspended till the account drops again to \$75 per employee. Employers may, in addition, secure complete exemption from the scheme by guaranteeing a minimum amount of employment of forty-two weeks (of thirty-six hours each) in the year to their workers. Two or more employers may maintain a joint account ; if they can arrange that fluctuations in employment in each firm are dovetailed so that the workers regularly transfer between the two employers, they can claim the financial advantages attaching to regularity of employment. The direct inducement to regularity is not very great, amounting at most to 2% of the total wage bill. The extent of this inducement is about the same as it would be in Great Britain if the full contribution of employers were refunded, as outlined above, for a year's continuous employment.

In many respects Great Britain has led the way in the development of unemployment insurance. It is possible, however, that there will be something to learn from the Wisconsin and other schemes and that their progress

¹ See *Ministry of Labour Gazette*, August, 1934, p. 274, and *United States Monthly Labour Review*, September, 1934. Benefits began to be payable in July, 1935.

will repay careful observation. Although great hopes must not be placed on the contribution refund system as an inducement to regularity, yet, if the refunds are sufficient, it may be effective within limits.¹ It is significant that a provision to encourage long hirings in place of casual labour is included in the British scheme for insurance against unemployment of agricultural workers.² Schemes of this description, too, have been proposed before now as a method of regularizing casual labour at the docks,³ and their introduction (or rather re-introduction) into one or two seasonal trades (such as the clothing trade), where fluctuations might be reduced without great disturbance, at any rate deserves consideration.

Another method by which a Government might help to bring about stabilization in seasonal trades consists of regulations restricting hours of work. All legislation governing hours of work sets a limit to seasonal fluctuation of production by preventing a given number of workers from producing more than a certain amount during a particular period of time. It is always possible, of course, to take on extra workers (which would actually intensify the seasonal fluctuation in the numbers employed) but this procedure would necessitate eventually the introduction of new plant, which might not be worth while.

¹ An alternative method of encouraging regular employment would be to provide that an employer must pay a certain sum—say 5s.—at every dismissal of a worker. This is suggested by Sir W. Beveridge in evidence to the Royal Commission on Unemployment Insurance (Vol. I, p. 723.)

² See p. 229.

³ See, for example, *Social Survey of Merseyside*, Vol. II, p. 144, and Lascelles and Bullock, *Dock Labour and Decasualization*, pp. 147-8.

4. THE REDUCTION OF SEASONAL VARIATION IN THE EMPLOYMENT OF THE INDIVIDUAL WORKER

The industrial policies outlined in the previous section are designed to reduce the fluctuations in activity of individual firms. It would be impossible, even with the fullest practicable application of all the methods suggested, completely to stabilize activity. But fluctuations in individual firms do not necessarily imply corresponding fluctuations in employment as a whole. If workers were able to move readily from seasonally slack to seasonally busy employers, they might be regularly employed in spite of the fluctuations in individual firms.

The dovetailing of seasonal occupations is one of the classical remedies for seasonal fluctuations. Yet its possibilities appear in actual practice to be very limited. It is restricted for the most part to semi-skilled and unskilled workers whose training is not highly specialized or who are able to learn more than one trade. Examination of the charts in Appendix III gives some idea of the *prima facie* possibilities of dovetailing as between industries. Thus during the early months of the year the principal busy trades are coalmining and certain textiles ; both are highly localized, demand highly skilled workers and are already provided with more than adequate reserves of labour. In the spring the majority of trades are busy ; coalmining, cotton, wool, and dock service are the principal trades suffering from seasonal depression at this time of the year, but there are not many industries in which those seasonally unemployed might be temporarily absorbed. Female cotton operatives might, however, take temporary work in the clothing trades, for at this season there is fre-

quently a shortage of labour in the latter industry especially in Lancashire. But difficulties of transport between Manchester and the cotton towns, and the differences in the type of work, are obstacles not particularly easy to surmount. Local and temporary interchange between coalmining and the unskilled building trade occupations (for example, painting) might also be possible.¹ From May to September the seasonal summer industries—holiday resort trades and temporary agricultural work—all require labour. Meanwhile cotton, wool, certain clothing trades (from July) and a few other similar industries employing considerable numbers of women are slack. At this season there is some opportunity for dovetailing and some of the women employed in these latter industries do, in fact, take up seasonal summer work. Fruit pickers and hop pickers are largely unemployed industrial workers. In the autumn and in December, most of the light industries and distribution are busy, while the slack industries are for the most part men's trades. Consequently, not very much dovetailing is practicable.

Another factor governing the possibility of seasonal dovetailing of occupations is the seasonal pattern of employment in different parts of the country. If there were appreciable differences of seasonal patterns in adjacent districts (and if the trades concerned were appropriate) temporary movement of workers might conveniently take place. In fact, however, seasonal fluctuations are very similar in neighbouring parts of Great Britain as analysis of the employment figures in

¹ Already there is a good deal of transfer—apparently permanent—from coalmining to the building trades. See *Ministry of Labour Gazette*, Nov 1934, p 391

each of the eight Divisions of the Ministry of Labour shows. Unemployment is most severe in winter and lightest in summer in London, the South East and the South West ; while in Wales, Scotland, the North East and the North West and the Midlands unemployment is high in summer and low in the winter (largely on account of the influence of coalmining). In all Divisions, the spring is a time of comparatively light unemployment. So far as geographical situation goes, then, some transference would be possible between these two groups of Divisions.

It seems, then, that the prospects of reducing seasonal unemployment by dovetailing must not be exaggerated. Some dovetailing does go on and more might be done, but the chief obstacles are, first, that the trades between which mobility is possible tend to move together and, second, that the geographical concentration of many industries prevents temporary movement from trade to trade.

These two obstacles are not entirely insuperable. It may be possible in some firms to commence the season a little later or end it a little earlier in order to allow dovetailing. An example is to be found in Coventry,¹ where the two seasonal trades employing women, wireless manufacture and motors, are both busy at the same time, but where efforts are being made to readjust the seasons. The geographical concentration of existing seasonal industries cannot, of course, be altered but the possibility of other work being available in the off-season ought to be a factor in the location of new firms in seasonal trades. This consideration is of special importance in the development of the new and expanding light industries ; it ought to be taken into

¹ See p 99.

account by employers setting up new factories with seasonally varying labour demands, or by any Government department which might, in the future, be concerned with control of industrial location.

Within those limits, how much more dovetailing of occupations could go on, and how can it be encouraged? The chief requirements seem to be, first, training, and second, organization of the labour market.

In the survey of the clothing industries, emphasis was laid on the increasing extent to which workers specialize in, and are confined to, small sub-divisions of the trade. Specialization, from the point of view of both employer and operative, brings considerable short term advantages. But although increasing the speed of operation, it may in the long run lead to difficulties. Especially in trades subject to the play of fashion, specialization leads to shortages of labour in certain sections which cannot be repaired from unemployed surpluses in other sections. Dovetailing of seasonal trades is, of course, impracticable unless the workers are accustomed to more than one type of work, but the worker who has had a fairly broad training in his or her own trade may be expected to pick up a new trade much more readily than the specialist.

Objection to the provision of wider training may be expected, however, both from workers and employers. The worker may object because training delays the time when he or she can earn good wages on piece-rates in a single process. Moreover the worker who is put on an unaccustomed job may at first earn so little more than unemployment benefit¹ that he would prefer to be out of work. Both these objections seem, however, somewhat short sighted; in the long run, regularity of

¹ See p. 159.

employment and fair proficiency in two or more operations would, in most cases, produce a larger annual income. The appropriate inducement to get over these objections would appear to be a guaranteed weekly wage to the worker who takes up a new piece-rate job during the first weeks ; the wage need not be as high as the earnings of an experienced worker but should at least be well above unemployment benefit. This expedient is sometimes adopted in the clothing trades.¹

An important objection of any individual employer to the proposal that he should give a wider training is that other employers would not follow his example but would instead " poach " his better trained workers. He would, therefore, bear the full expense of the training without getting the full advantages. An agreed policy on the part of the trade as a whole, or at least between the principal employers, is required. In some cases this might be secured by Trade Board regulation or, where this is impracticable, by trade union agreement.

If the amount of dovetailing is to be increased it must be organized ; the employment exchanges are the obvious machinery for putting seasonally unemployed workers in one trade in touch with vacancies in other, and busy, industries. Efforts are already being made by the exchanges to encourage dovetailing but so far the results have not been very striking. If the exchanges are to extend their activities in this direction, they must, first of all, be more widely used by employers. At present, it is estimated, only about 24% of the vacancies² occurring in industry are filled by the

¹ See p. 159.

² *Ministry of Labour Annual Report, 1933*, p. 22. The figure only refers to wholly unemployed workers.

exchanges. In trades where employment is both seasonal and casual there is, perhaps, much to be said for the reduction of the necessary labour reserve to the minimum by making compulsory the notification of all vacancies to employment exchanges.¹

An interesting example of a set of trades where dovetailing might be carried out is found in Southampton. Three trades, dock work, shipping and ship repairing—all to some extent seasonal and with different seasonal patterns—employ large numbers of casual and semi-casual workers; the work is of such a nature that much of it could be done, after a little experience, by most men from any of the three trades. In practice a certain number of men do transfer from one trade to another but each trade carries a very large reserve of its own unemployed at nearly all times of the year. It would seem that with organization through employment exchanges, assisted by the employers and trade unions, the total reserve could be much reduced and more regular work assured to the men in all three trades.²

In general, dovetailing must be limited to finding alternative employment for individual workers. In some cases, however, it might be possible for a body of workers to move regularly between two employers. The organization of such transfers could be undertaken by the exchanges. But it is only in exceptional cases that such an arrangement would be practicable. The seasons must coincide exactly, or, at least, must never overlap and the requirements of the

¹ In evidence to the *Royal Commission on Unemployment Insurance* (Vol. I, p. 723), Sir W. Beveridge suggested that use of exchanges might be made compulsory in certain trades where there is "excessive unemployment" either because of decline or on account of casual labour.

² See P. Ford, *Work and Wealth in a Modern Port*, Ch. IV.

two employers as regards the occupations and sex compositions of the workers must be the same.¹

More complete organization of the labour market in seasonal trades is required not only to facilitate dovetailing but in order to ensure as much regular employment as possible for those attached to a single seasonal trade. Far more workers are often attracted to seasonal trades by the chance of some employment in the busy season than can be employed even at the peak. Some reserve is needed but the actual reserve is often far in excess of maximum requirements. The availability of so many casual workers eager to snatch at any temporary job itself encourages employers to perpetuate irregular methods of operation. More centralized organization, through more extensive use of employment exchanges, could, in most cases, reduce the reserve and yet ensure an adequate provision of labour.

The alternative maladjustment is a shortage of labour during the busy season ; this too, is to be found, notably in the clothing trades, and could also be remedied, at least in part, by better use of the employment exchanges.

In the organization of the labour market, trade unions have the opportunity of playing a very considerable part. By trade union pressure, uniform standards can be imposed, the worst employers can be brought into line with the best, the demoralizing effects of a fringe of casual or semi-casual labour can be prevented and restrictions can be imposed on overtime

¹ Examples of this arrangement are found in the United States. Several canning factories also conduct lumbering and employ some of their workers in both kinds of work. Feldman. *Regularization of Employment*, p. 330. A large part of the staff of the Dayton Frigidaire Corporation transfer regularly to the Dayton works of the National Cash Register Co. in winter. E. S. Smith. *Reducing Seasonal Unemployment*, p. 251.

working. All such action will tend to make more difficult irregular operation. In most trades, it is believed that a much greater degree of stabilization can be attained without any increase in costs; trade union action seems to be precisely the kind of all-round pressure most likely to be effective in stimulating a policy of stabilization.

5. THE TREATMENT OF RESIDUAL SEASONAL UNEMPLOYMENT

The methods of reducing irregularity of production and employment so far proposed are likely to leave an appreciable residuum of seasonal unemployment in many industries. There are, however, several methods which might be adopted to reduce the harmful effects on the workers of irregular employment without reducing the seasonal fluctuations in the activity of the industries concerned.

First we must consider the spreading of what seasonal unemployment is necessary over a large number of workers. Instead of some being unemployed during the whole off-season, all may be employed for at least a certain period every week, or month. This may be accomplished by the reduction of daily hours of work, a system already adopted in sections of the highly unionized hatting trade.¹ Another method of securing the same object is systematic short-time working, the employment of each worker for only part of the week or for one week in two or three. This is the normal way of meeting short-period fluctuations in coalmining and, to a considerable extent, in the cotton industry. The periods of employment are usually fixed in accordance

with the continuity rules of unemployment insurance, so that the worker can get benefit in addition to part-time earnings. But like many of the other policies proposed here, a measure of this kind must be adopted by the greater part of an industry. If one firm were to put all its workers on short-time, the more capable might leave and secure full-time work elsewhere, even in the slack season.

Next, it has been emphasized that one of the serious results of seasonal fluctuations is the harmful effects on the worker of an irregular income. To overcome this, the dyeing and cleaning industry has adopted a method of wage payment which might well be extended. The seasonal variations in this industry are met for the most part by overtime and short-time working. Time-workers are paid a fixed weekly rate throughout the year. During the slack season, the number of hours short of the normal week during which the worker is not required are debited to him. During the busy season he works overtime for no extra pay, until he has worked off the number of hours debited to his account. Overtime in excess of the hours debited is paid at higher rates; but the worker is not required to make any refund if he is not employed for a sufficient number of hours overtime to work off the short-time. The scheme is restricted to workers of over five years standing. Pieceworkers are not included, but are guaranteed at least three-quarters of the time workers' wage all year round.¹

Lastly, public works might be used to counter seasonal unemployment. Just as public works have been constantly advocated (though rarely employed) to

¹ A similar scheme is in operation in the F.I.A.T. works in Turin. See I.L.O. report on *Hours of Work and Unemployment* (1933), p. 90.

smooth over cyclical depressions, so they might be concentrated on periods of seasonal slackness. The obvious objection is that the kind of jobs of which public works must consist are jobs which, being mostly out of doors, can best be done in the summer. The seasonal curve of the public works contracting industry¹ shows a very marked seasonal fluctuation with a peak in May or June and a trough in January. Thus the men engaged on public works are themselves thrown out of work when seasonal unemployment is severe in the trades—such as building—from which they are mostly recruited. Certain kinds of public works might, however, be carried on to a greater extent during the winter, for example road construction and maintenance.² In Germany, by the 1927 law providing for productive unemployment relief through Government loans to public or private undertakings, it was a condition of the loans that as much as possible of the work done should be carried out in winter.³ The Hitler Government's *Arbeitschaffung* programme of 1933-34 was designed partly to prevent or reduce the usual winter increase in unemployment. Thus extensive loans were made by the Government to encourage such work as internal house repairs and decoration, and the dividing of houses into flats, all of which would give work to builders who would otherwise be seasonally unemployed. The public works programme, too, seems to have obliterated almost completely the normal seasonal recession during the

¹ See App. III.

² Modern methods of road construction, notably the replacement of water-bound macadam by bituminous and concrete surfaces, are not well suited to winter conditions, but winter work is not impossible (except in frost) if care is exercised and surfaces protected.

³ A similar provision is included in Swedish public works legislation.

winter of 1933-34 in the *Tiefbau* section of the Building industry, which includes bridge and road building, canals, sewers, and similar navvying jobs.¹ In Sweden, too, employment on Government relief projects—which have, since 1920, played a very important part in the relief of unemployment—has always been greater in the winter than in summer. From 1920 to 1930, the number engaged was regularly about twice as high in the peak month (about February) as in the trough (about September).² More might reasonably be expected, then, from the careful timing of public works in Great Britain with a view to absorption of the seasonally unemployed.

6. SUMMARY

We may now sum up the conclusions of this chapter. An attack on the whole problem of seasonal fluctuations and on the unemployment accompanying them would have every prospect of success. It would not only reduce costs by making possible more efficient, because more regular, use of labour and plant, but would also do away with a great part of the insecurity and demoralizing irregularity to which the worker in a seasonal trade is subject.³ In this attack, the Government and local authorities, employers and trade unions, must co-operate. Although progress will, no doubt, be

¹ See the *Vierteljahrshefte zur Konjunkturforschung*, 9 Jahrgang, Heft 2 Teil B. p. 124.

² C. J. Ratzlaff. *The Scandinavian Unemployment Relief Program*, p. 46.

³ Although they are not the direct concern of the present work, yet it may be observed that what have been described as short-time irregular fluctuations in industrial activity are to some extent of the same nature as seasonal fluctuation. The methods suggested for the reduction of the latter would undoubtedly result in the partial reduction of the former as well.

gradual, the programme, if it is to be effective, must be developed along the lines of a planned and concerted policy. Since seasonal fluctuations are, as we have constantly emphasized, closely bound up with the internal organization and policy of industry, the main drive towards stabilization must come from within industry, from employers and trade unions. Efforts can be made to reduce the seasonality of demand by propaganda and by price policy. Production can be regularized—in spite of seasonal demand—by increased standardization and by the reduction of unnecessary variety and change of design of products so as to permit more extensive making for stock, by the securing of earlier orders, by the production of more than one class of goods so as to dovetail seasonal demand patterns, and by the use of all available technical methods to reduce the difficulties of work at certain times of the year. Seasonal irregularities in the demand for labour of individual firms or industries can be prevented from giving rise to unemployment by co-operation in the better organization of the labour market through trade unions and by more extensive use of employment exchanges, and by more thorough training so as to facilitate the dovetailing of seasonal occupations. Lastly, where seasonal unemployment is unavoidable, its depressing effects can be reduced by the sharing out of work over as many workers as possible and by some approach towards the equalizing of weekly incomes of workers over the year. In each industry, it must be remarked, the problem is slightly different, and these methods are not all equally appropriate in every case.

The State can materially assist such a campaign at several stages. As important consumers, public authorities can time their own contracts and purchasing so as

to assist the stabilization over the year of the total demand from all consumers. The State can encourage the better organization of the labour market through the employment exchanges, can restrict overtime and can alleviate seasonal unemployment to a certain extent by the timing of suitable public works. By an adjustment of the unemployment insurance system a positive stimulus might be provided to regular operation. Finally it must be remembered that the community bears the burden of seasonal variations, a burden felt both through high costs and prices and through the necessity of maintaining the two or three hundred thousand persons who are, on the average, seasonally unemployed. Seasonal fluctuations represent a waste of resources, human and mechanical, which might to a great extent be avoided; they may only account for a proportion of the unemployed but the numbers are large enough to merit a vigorous efforts for their reduction.

APPENDIX I GENERAL STATISTICS RELATING TO SEASONAL INDUSTRIES

(i)	(a) Amplitude of Seasonal Variation.				(b) Seasonal Labour Reserve (Employed at Peak less average employed at % Insured)	(c) Average Seasonal Unemployment at % Insured		(10) Average Total Unemployment as % Insured	(11) Average numbers Employed		(12)	(13)		
	Range of Seasonal Variation as % of Insured		Mean of Monthly Percentage Deviations			Order of Industries acc. to Mean per Centage Deviations			1924					
	Average 1924-31	Average 1930-32	Average 1924-31	Mean per Centage Deviations		Average 1924-31	1924		1931	1932			1924	1931	1932
CONSTRUCTION AND RAW MATERIALS														
<i>(a) Extractive</i>														
Coalmining	12.7	16.3	2.7	5	6.3	3.9	6.5	7.3	1187	903	688			
Coke Ovens & By-products	12.8	12.3	1.6	17	6.1	7.9	4.3	2.1	12	10	8			
Lead, Tin & Copper Mining	12.1	19.8	1.9	13	4.3	0.8	2.6	2.7	4	4	1			
Clay, Sand, Gravel & Chalk Pits	6.5	8.0	0.9	38	2.4	1.6	0.8	1.3	13	15	12			
Mining & Quarrying	8.1	8.7	0.8	39	3.0	3.8	2.4	0.6	21	15	11			
<i>(b) Metals</i>														
Hand Tools & Cutlery	7.2	9.4	1.3	25	3.8	5.2	1.9	3.2	27	29	22			
Brass & Allied Metal Wares	5.2	6.4	0.6	51	2.7	2.5	0.8	1.6	25	26	21			
Metal Industries, n.s.s.	6.5	4.7	0.6	53	2.3	0.9	1.9	2.8	156	176	165			
<i>(c) Engineering</i>														
Motor Vehicles, Cycles & Aircraft	6.0	7.8	1.2	28	3.0	1.0	1.4	1.4	186	227	201			
Railway Carriages, etc.	6.3	9.7	0.7	45	2.2	1.0	0.5	2.1	49	49	36			
Carriages, Carts, etc.	5.5	6.4	1.1	32	2.7	1.9	3.6	2.2	22	17	14			
Electrical Engineering	4.1	2.1	0.4	59	1.8	1.9	2.1	0.3	67	81	78			
Shipbuilding & Repairing ..	12.0	15.3	1.4	20	5.3	2.4	8.1	2.5	178	155	67			

1 N.S.S. = not separately specified.

(1)	(2) Amplitude of Seasonal Variation		(3) Range of Seasonal Variation as % of Insured		(4) Mean of Percentage Monthly Deviations		(5) Order of Industries acc. to Mean percentage Deviations.		(6) Seasonal Labour Reserve (Employed at Peak less average employed as % insured)		(7) Average Seasonal Unemployment as % Insured			(10) Average Total Unemployment as % Insured		(11) Average numbers Employed (000's)		
	Average 1924-32	Average 1930-32	Average 1924-32	Average 1924-32	Average 1924-32	Average 1924-32	Average 1924-32	Average 1924-32	Average 1924-32	Average 1924-32	1924	1928	1932	1924-32	1924	1929	1932	1932
<i>(d) Building and Associated Industries.</i>																		
Building	9.3	8.7	2.7	4	3.4	1.9	3.1	2.8	15.4	648	716	610						
Stone Quarrying	9.1	8.3	1.7	15	3.1	1.6	2.2	4.2	12.3	34	38	34						
Cement, Lime Kilns	8.1	9.8	1.1	30	3.1	1.1	1.2	2.0	11.6	15	18	12						
Artificial Stone & Concrete ...	8.4	3.3	1.4	22	3.1	2.2	2.6	1.7	17.8	10	15	16						
Brick, Pipe, Tile, etc., making	7.2	4.5	1.3	26	2.6	1.9	1.4	1.6	12.3	65	73	68						
Sawmilling and Machined																		
Woodwork	3.7	4.4	0.7	46	1.6	0.4	0.1	1.8	12.5	52	52	46						
Heating & Ventilating Apps. ...	7.6	3.9	0.8	40	3.7	10.2	3.0	0.9	8.9	6	8	8						
Wallpaper	6.7	7.6	2.4	7	3.2	3.6	3.2	3.5	7.0	5	6	5						
Woodworking, n.s.s. ¹	3.7	4.4	0.7	42	1.7	1.4	1.8	1.9	13.5	23	21	18						
Electric Wiring & Contractg. ...	8.0	9.3	0.9	35	4.5	2.9	3.5	4.9	9.9	12	16	20						
Public Works Contracting ...	10.8	14.0	1.9	14	4.7	1.5	2.2	4.4	23.2	112	132	174						
<i>(e) Others.</i>																		
Wood Boxes & Packg. Cases	4.7	4.0	0.8	41	2.2	3.7	0.9	1.4	16.5	11	11	9						
Hemp, Rope, Cord, Twine making	7.0	10.5	1.4	21	3.4	1.5	3.8	5.0	16.6	17	17	14						
<i>2. TRANSPORT AND DISTRIBUTION.</i>																		
Shipping Service	6.1	6.0	1.6	16	2.4	2.5	1.2	2.5	22.4	97	117	105						
Dock, Harbour, River & Canal Service	6.0	6.0	1.0	34	3.5	0.4	1.0	2.8	31.5	145	118	109						
Railway Service ²	4.9	5.8	0.7	43	2.0	2.1	1.5	2.1	8.5	105	131	112						
Tram and Bus Service	4.7	3.7	0.4	58	2.0	1.5	1.4	1.3	3.9	115	149	169						
Road Transport n.s.s. ¹	4.2	3.3	0.7	44	1.6	0.3	0.7	1.6	15.1	128	161	162						
Distributive Trades	4.4	3.5	0.5	57	2.0	1.2	0.4	0.9	7.8	1265	1576	1705						

¹ N.S.S. = not separately specified.² Non-permanent staff only.

GENERAL STATISTICS RELATING TO SEASONAL INDUSTRIES (CONTINUED)

GENERAL STATISTICS RELATING TO EMPLOYMENT IN GREAT BRITAIN

	(2) Amplitude of Seasonal Variations.			(4)		(5) Order of Industries according to Mean percentage Deviations	(6) Seasonal Labour Reserve (Estimated) less average employment as % of insured	(7) Average Seasonal Unemployment as % of insured		(10) Average Total Unemployment as % of insured	(11) Average numbers Employed (000's)				
	Range of Seasonal Variation as % of insured	(3)		Mean of Monthly Deviations 1924-29	Percentage Deviations 1924-29			Average 1914-15	Average 1915-16		Average 1916-17	Average 1917-18	Average 1918-19	Average 1919-20	Average 1920-21
		Average 1914-15	Average 1915-16												
3 CONSUMPTION INDUSTRIES.															
(a) Textiles															
Cotton	11.9	19.4	3.1	3	6.4	7.4	1.5	6.1	487	481	568				
Woolen & Worsted	9.7	13.1	2.1	11	4.9	3.0	5.1	5.9	244	206	185				
Linen	17.6	25.5	3.2	2	8.9	1.1	13.2	6.7	75	69	56				
Lace	7.5	10.2	1.2	29	3.8	3.1	2.6	5.6	17	15	14				
(b) Clothing															
Tailoring	10.8	10.8	3.4	1	5.4	4.6	5.6	5.3	172	183	179				
Dressmaking & Millinery	6.4	6.7	1.6	18	2.8	3.2	2.7	3.6	99	98	93				
Shirts, Underclothing, etc.	4.9	4.9	0.2	63	1.9	1.6	1.6	2.3	67	76	77				
Hats and Caps	9.7	12.7	2.1	10	3.7	4.4	2.9	4.1	30	33	30				
Hosiery	6.8	9.5	1.3	24	3.8	1.7	1.1	4.2	87	99	100				
Boots & Shoes, etc.	8.8	10.8	0.9	36	3.6	1.4	8.5	3.8	130	117	110				
(c) Food, Drink & Tobacco															
Fishing	9.2	9.1	2.2	8	3.8	2.6	3.3	3.6	22	25	24				
Bread, Biscuits, Cake	3.0	3.0	0.5	56	1.4	0.4	0.6	1.4	132	135	140				
Cocoa, Chocolate Confectionery	6.7	5.5	1.3	23	2.9	4.2	1.0	3.2	65	66	62				
Food Industries n.s.t.	5.8	4.5	1.2	27	2.5	3.6	1.5	2.7	95	101	100				
Drink Industries	2.6	2.3	0.3	62	1.2	1.0	0.2	1.4	101	101	93				
Tobacco, etc.	3.9	2.9	0.7	49	1.8	1.3	2.5	1.6	40	44	43				
(d) Printing and Paper.															
Cardboard Boxes, Stationery.	3.4	3.8	0.5	55	1.8	0.5	1.7	2.4	51	55	56				
Printing, Publishing & Book-binding	2.8	2.0	0.4	61	1.2	0.9	1.0	0.8	223	250	254				

* N.S.S. = "not separately specified."

GENERAL STATISTICS RELATING TO SEASONAL INDUSTRIES (CONTINUED)

(1)	(2) Amplitude of Seasonal Variation.			(3)		(4)		(5)		(6)			(7) Average Seasonal Unemployment as % Insured			(10) Average Total Unemployment as % Insured		(11) Average numbers Employed (000's)		
	Range of Seasonal Variation as % of Insured	Average 1930-32	Mean of Monthly Percentage Deviations 1924-32	Order of Industries acc. to Mean percentage Deviations.	Seasonal Labour Reserve (Em- ployed at Peak less average em- ployed as % Insured)	Average 1924-32	1924	1928	1932	1924-32	1924	1929	1932	1924	1929	1932	Average numbers Employed (000's)	1924	1929	1932
(1)	Average 1924-32	Average 1930-32	Mean of Monthly Percentage Deviations 1924-32	Order of Industries acc. to Mean percentage Deviations.	Seasonal Labour Reserve (Em- ployed at Peak less average em- ployed as % Insured)	Average 1924-32	1924	1928	1932	1924-32	1924	1929	1932	1924	1929	1932	Average numbers Employed (000's)	1924	1929	1932
<i>(e) Other Manufactures.</i>																				
Pottery	11.0	14.2	2.7	6	3.8		1.1	2.7	3.3	20.6	6.4	63	51							
Electric Cables & Apparatus	6.5	5.9	0.6	54	3.7		4.0	3.7	4.1	8.2	7.0	89	102							
Musical Instruments	9.2	9.0	2.2	9	5.4		5.0	5.7	4.7	11.2	18	26	19							
Watches, Clocks, Jewellery	4.5	6.3	1.5	19	2.4		1.0	0.4	4.9	12.3	42	39	33							
Rubber	5.8	7.9	0.6	50	2.0		0.5	1.2	1.4	12.3	52	60	52							
Tanning, Currying and Dressing of Leather	4.7	5.7	0.6	51	2.0		2.0	0.4	3.5	11.9	38	37	35							
Leather Goods	5.2	8.5	1.0	33	2.5		0.1	0.6	4.7	11.7	25	24	21							
Furniture & Upholstery	4.9	3.2	0.7	47	2.1		0.8	1.9	1.9	9.7	90	113	106							
Brushes & Brooms	6.6	9.0	1.1	31	3.0		2.2	0.3	2.2	13.9	9	9	10							
Toys, Games & Sports Apparatus	5.1	4.1	0.7	48	2.2		0.6	1.1	2.1	9.9	10	12	12							
<i>(f) Services.</i>																				
Entertainments & Sports Hotel, Public House, Restaurant, Boarding-house, Club, etc., Service	5.6	6.7	0.9	37	2.6		2.9	1.6	2.1	14.0	57	65	78							
Laundries, Dyeing, etc.	6.9	6.4	2.0	12	3.3		4.5	2.0	3.1	12.0	253	303	317							
	3.1	2.2	0.4	60	1.3		1.2	0.4	0.8	6.3	106	129	135							

APPENDIX II(a)

AVERAGE CHANGE (+ or -) FROM PRECEDING MONTH IN UNEMPLOYMENT PERCENTAGES IN CHIEF SEASONAL INDUSTRIES 1924-32

	Jan	Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Coalmining ...	—	+0.1	+0.6	+0.6	+1.6	+2.2	+1.3	-0.6	-1.2	-0.6	-1.3	-2.5
Brick, Pipe, Tile	+1.4	-0.7	-1.2	-0.8	-0.6	-0.5	-0.4	+0.7	+0.4	+1.0	+0.8	-0.1
Motor Vehicles ...	—	-0.2	-0.9	-0.5	+0.2	+1.0	+1.2	+1.3	-0.4	-1.1	-0.6	-0.6
Shipbuilding ...	-0.3	-0.3	-0.3	-0.8	+0.5	+0.1	-0.1	+0.8	+0.3	+0.8	—	-0.4
Electric Cables, etc.	+1.7	+0.5	+0.1	+0.2	-0.3	-0.1	-0.3	-0.9	-0.5	-0.2	+0.1	—
Cotton ...	+0.4	+0.1	+0.1	+1.4	+0.5	+0.2	+1.6	+1.0	-1.4	-2.3	-0.7	-1.1
Wool ...	+2.0	-1.1	-1.1	-0.1	+1.1	+1.9	+1.2	-0.2	-1.3	-1.2	-0.5	-0.3
Linen ...	-1.2	-0.9	-0.3	+1.3	+1.6	+1.2	+2.4	-1.0	-0.8	-0.8	-0.3	-0.9
Tailoring ...	+2.0	-3.4	-4.2	-2.2	-0.7	+1.0	+2.6	+3.2	+1.1	-1.6	+1.1	-1.1
Dressmaking & Millinery	+2.0	-2.0	-2.5	-1.2	-0.6	+0.3	+1.1	+1.5	-0.5	-0.4	+2.3	—
Hats & Caps	-3.4	-2.0	-1.0	-1.3	-0.5	+1.2	+1.0	+0.6	+0.2	+1.9	+4.3	-1.3
Boots & Shoes	-0.1	-1.1	-0.2	+0.1	+0.1	-0.1	+1.7	—	-1.0	-1.1	-0.1	+1.5
Bread, Biscuits	+1.3	-0.1	-0.4	-0.5	-0.3	-0.5	-0.5	+0.1	+0.6	+0.6	+0.1	-0.6
Food, n.s.s. ¹	+0.5	-0.2	-0.9	-0.8	-0.2	-1.5	-0.5	+1.0	+1.8	-1.6	+0.9	+1.5
Drink ...	+1.1	+0.2	-0.4	-0.3	-0.1	-0.1	-0.2	+0.4	+0.1	+0.2	+0.1	-0.7
Furniture	+2.6	+0.2	-0.8	-0.4	-0.5	-0.7	+0.6	+0.3	-0.5	-0.3	-0.1	+0.1
Printing & Publishing	+1.2	-0.3	-0.3	-0.1	-0.2	-0.2	-0.2	+0.2	—	+0.1	-0.2	-0.3
Building ...	+2.2	-2.0	-3.3	-1.8	-1.2	-0.1	+0.4	+0.1	+1.1	+1.4	+2.6	+1.2
Railway Service ...	+0.8	-0.3	-0.4	-0.6	-0.3	-0.4	-0.2	+0.1	+0.2	+0.8	+0.5	-0.5
Tram and Bus ...	+0.3	-0.1	-0.3	-0.4	-0.3	-0.3	-0.2	+0.1	+0.2	+0.5	+0.3	-0.3
Road Transport n.s.s. ¹	+1.1	-0.3	-0.9	-0.5	+0.3	-0.7	—	+0.4	+0.3	+0.7	+0.3	-0.5
Shipping ...	+0.2	-1.2	-0.8	-0.4	-0.6	-0.9	+0.8	-0.4	+0.2	+2.5	-0.7	+0.1
Dock & Harbour...	+1.1	+1.1	+0.5	—	+0.9	-1.4	-0.4	+0.2	-0.1	-0.5	+0.3	-1.4
Distributive ...	+1.1	+0.3	-0.4	-0.4	-0.3	-0.4	—	+0.2	+0.2	+0.2	—	-0.8
Hotel etc. Service	+0.2	-0.5	-0.9	-1.3	-0.7	-1.1	-0.5	+0.1	+1.4	+2.9	+1.0	-1.1
Laundries ...	+0.2	-0.1	-0.4	-0.3	-0.1	-0.3	+0.2	+0.5	+0.3	+0.2	+0.4	-0.4

¹ N.S.S. — Not separately specified.

APPENDIX II (b)

AVERAGE CHANGE (+ or -) FROM PRECEDING MONTH IN NUMBERS UNEMPLOYED IN CHIEF SEASONAL INDUSTRIES. 1924-32

	Insured July, 1924	Jan.	Feb.	March	April	May	June
Coalmining	981,520	—	980	5,890	5,890	+ 15,700	+ 21,590
Brick, Pipe, Tile	95,610	+ 1,340	6,690	1,150	760	670	480
Motor Vehicles	271,530	—	540	2,440	1,360	540	2,720
Shipbuilding	158,790	—	480	—	1,270	790	160
Electric Cables, etc.	133,280	+ 2,270	670	130	270	400	130
Cotton	467,440	+ 1,870	470	470	6,540	+ 2,340	930
Wool	229,590	+ 4,590	2,530	2,530	230	+ 2,530	4,360
Linen	74,630	—	670	220	970	+ 1,190	900
Tailoring	208,900	+ 4,180	7,100	8,770	4,600	—	2,090
Dressmaking & Millinery	102,790	+ 2,060	2,060	2,570	1,230	—	310
Hats & Caps	34,650	—	690	350	450	170	420
Boots & Shoes	139,390	—	1,530	280	140	+ 140	140
Bread, Biscuits, Cakes, etc.	166,980	+ 2,170	170	670	830	500	830
Food Industries, n.s.s.	127,500	+ 640	260	1,150	1,020	260	1,910
Drink Industries	110,200	+ 1,210	220	440	330	110	110
Furniture Making, etc.	135,960	+ 3,540	270	1,090	540	680	950
Printing & Publishing	279,730	+ 3,360	840	840	280	560	560
Building	928,250	+ 20,420	18,570	30,630	16,710	—	930
Railway Service	134,020	+ 1,970	400	540	800	400	540
Tram & Bus	182,600	+ 550	180	550	730	550	550
Road Transport, n.s.s.	213,830	+ 2,350	640	1,920	1,070	640	1,500
Shipping Service	150,420	+ 300	1,810	1,200	600	900	1,350
Dock & Harbour Service	164,540	+ 1,810	1,810	820	—	+ 1,480	2,300
Distribution...	2,005,340	+ 22,060	6,020	8,020	8,020	6,020	8,020
Hotel, etc. Service	410,040	+ 820	2,050	3,690	5,330	2,870	4,510
Laundries	152,890	+ 310	150	610	460	150	460

APPENDIX II (b) (continued)

	Insured July, 1914	July	August	September	October	November	December
Coalmining ..	981,320	+ 12,760	+ 5,890	- 11,780	- 5,890	- 12,760	- 24,510
Brick, Pipe, Tile ..	95,610	- 350	+ 670	+ 350	+ 960	- 760	- 100
Motor Vehicles ..	271,530	+ 3,260	+ 3,530	- 1,090	- 2,990	- 1,630	- 1,630
Shipbuilding ..	158,790	- 160	+ 1,270	- 480	+ 1,270	- 130	- 640
Electric Cables, etc ..	133,280	- 400	- 1,200	- 670	- 270	+ 130	- 5,140
Cotton ..	467,440	+ 7,490	+ 4,670	- 6,540	- 10,750	- 3,470	- 690
Wool ..	289,560	+ 2,760	- 460	- 2,950	- 2,760	- 1,150	- 670
Linen ..	74,630	+ 1,790	+ 750	- 600	- 600	- 220	- 2,300
Tailoring ..	208,900	+ 5,430	+ 6,680	- 230	- 3,340	- 2,300	- 2,300
Dressmaking & Millinery ..	102,790	+ 1,130	+ 1,540	- 510	- 410	+ 2,360	- 2,360
Hats & Caps ..	34,650	+ 350	+ 210	- 70	- 660	- 1,490	- 4,500
Boots & Shoes ..	139,390	+ 2,370	- 170	- 1,390	- 1,530	- 140	- 2,690
Bread, Biscuits, Cakes, etc. ..	166,980	- 830	+ 170	+ 1,200	+ 1,000	- 170	- 1,000
Food Industries, n.s.s. ..	127,500	- 640	+ 1,250	- 2,300	- 2,040	- 2,150	- 1,910
Drink Industries ..	110,200	- 220	+ 441	+ 160	- 270	+ 110	- 770
Furniture Making, etc ..	135,960	- 820	+ 410	- 680	- 410	- 140	- 240
Printing & Publishing ..	270,730	- 560	+ 560	- 380	- 280	- 560	- 840
Building ..	918,250	+ 3,710	+ 930	+ 10,210	+ 13,000	+ 14,830	+ 21,140
Railway Service ..	134,020	- 370	+ 130	- 270	- 1,070	- 670	- 670
Tram & Bus ..	182,600	- 370	+ 180	- 370	- 910	- 550	- 550
Road Transport, n.s.s. ..	213,830	- 1,200	+ 860	- 640	- 1,500	- 640	- 1,070
Shipping Service ..	150,420	+ 660	- 600	- 300	- 3,760	- 1,050	- 130
Dock & Harbour Service ..	104,540	- 660	+ 330	- 160	- 810	- 490	- 2,300
Distribution ..	2,003,340	- 2,950	+ 4,010	- 4,010	+ 4,010	- 4,100	- 10,040
Hotel, etc Service ..	410,040	+ 310	+ 760	+ 5,740	+ 11,690	+ 4,100	- 4,510
Laundries ..	157,890	- 310	- 760	- 460	- 310	- 610	- 610